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ALBINUS

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St Thomas's Hospl
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TABLES

OF THE

SKELETON

AND

MUSCLES

OF THE

HUMAN BODY,

BY

BERNARD SIEGFRIED ALBINUS.

Tranſlated from the LATIN.

A. Bell Sculpt.

EDINBURGH:
Printed by BALFOUR & SMELLIE,
For ANDREW BELL Engraver.

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TO

ALEXANDER MONRO, M. D.

PROFESSOR OF MEDICINE AND OF ANATOMY

IN THE

UNIVERSITY of EDINBURGH.

SIR,

YOU have long filled the Anatomical Chair of this Univerſity with an ability and a reputation that have done honour to your country. Your deſire to promote, on every occaſion, the inſtruction of your pupils is univerſally acknowledged. A work of this kind, therefore, if properly executed, muſt naturally obtain your patronage and protection.

IT was not without diffidence that I was prevailed upon to engage in an undertaking which requires ſo much labour and accuracy: But the ſpecimens I laid before you having been ſo fortunate as to receive your approbation, this circumſtance encouraged me to proceed in publiſhing the Tables of the celebrated ALBINUS upon the Bones and Muſcles of the Human Body.

THE London Edition of this elegant and maſterly performance is now ſcarce; and the Plates have become faint by frequent impreſſions. From theſe conſiderations, and others mentioned in the Preface, I flatter myſelf, that the preſent Edition will facilitate the ſtudy of Anatomy, the knowledge of which is ſo eſſentially neceſſary to all who deſign to follow the practice of Phyſic or of Surgery. I am,

SIR,

With the greateſt Reſpect,

Your moſt obedient

EDINBURGH, FEB. 17. 1777.

And moſt humble Servant,

ANDREW BELL.

PREFACE.

THE parts of which the human body is compoſed, are extremely numerous and complicated. It is, perhaps, this circumſtance alone which has deterred any ſingle perſon from attempting to publiſh a ſet of Tables that ſhould comprehend exact delineations of the whole.

THE Tables of Euſtachius are the moſt extenſive that have hitherto appeared: And, if he had been equally ſkilled in the arts of deſigning and engraving *, as he was accompliſhed in the ſcience of anatomy, Albinus would never, perhaps, have beſtowed ſo much time, labour, and expence in travelling over the ſame ground.

THOUGH Albinus was a compleat maſter of the ſubject, and though he was actuated by the moſt ardent deſire of accompliſhing his favourite deſign, and had the aſſiſtance of an able artiſt; yet he laid aſide entirely the labour of ſeveral years, becauſe the execution did not anſwer the ideas he had conceived. He ſet out with planning the muſcles; and was very anxious to have them exactly expreſſed in the figures, not ſingly alone, but in the order they lie with reſpect to each other. But, as many of the muſcles are ſituated behind others, it became neceſſary to divide them into certain orders or layers; the firſt of which ſhould contain thoſe that lie immediately under the integuments; the ſecond, thoſe next the former; and ſo of the reſt. He was therefore deſirous that the members ſhould not only be kept in the ſame poſition, while the figures of the different layers were drawing, but that theſe layers ſhould be exactly continued into one another, and that, by this means, they might all appear in the ſame manner as they do in the body when placed in the ſame light and attitude.

BUT, though the views drawn according to this plan were executed with much dexterity, Albinus found it impoſſible to point out to the engraver, the ſeveral ſizes, directions, inſertions, and connections of the internal muſcles, in ſuch a manner, that they could be diſtinctly expreſſed in the drawings. This circumſtance obliged him to have recourſe to another method, which he candidly acknowledges muſt have been that which Euſtachius had followed: And, about the end of the year 1725, he prepared a male ſkeleton of full growth and firmneſs, and which diſcovered the ſigns of elegance, ſtrength, and agility. After cleaning the bones, he allowed the ligaments which unite them to remain, in order to keep all the parts in their proper ſituations. And, having procured an iron tripod, for the purpoſe of ſuſpending and fixing the ſkeleton, he next tied a cord round the upper part of the ſpine, and, paſſing the end of it through a ring fixed in the ceiling, he raiſed the trunk of the ſkeleton in ſuch a manner as to let the lower end of it reſt upon the back limb of the tripod; and then fixed the rope to a hook in the wall. By the aſſiſtance of other ropes, in various directions, the poſition of the ſkeleton was adjuſted from a lean naked man ſtanding in that natural and elegant attitude in which the tables of the ſkeleton are repreſented.

HIS next care, after finiſhing the poſture of the ſkeleton, was to have an exact figure of it drawn. For this purpoſe, he provided a wooden quadrate, having the intermediate ſpace as large as the ſkeleton, and the whole equally divided into little ſquares, all of the ſame ſize, by means of ſmall cords ſtretched out between them. After fixing the proper point of view, the engraver directed his eye to the ſkeleton through a ſmall hole: And, his paper being divided into the ſame number of ſquares with the quadrate, ſuch parts of the ſkeleton as appeared through the ſquares of the quadrate, he drew in the correſpondent ſquares upon the paper. By this method, the drawing was kept in exact proportion with the original; and the engraver, in the ſpace of three months, finiſhed the fore, the back, and the ſide views of the ſkeleton.

IN theſe three figures, the poſture of the ſkeleton, together with the poſition and connection of all the bones, were accurately expreſſed: But the ligaments that remained on the joints, though they had been cut, in order to obtain a view of thoſe parts of the bones which they concealed, prevented the drawings from being finiſhed till the bones ſhould be cleaned. He therefore took down the ſkeleton, and had all the bones perfectly cleaned: But he deferred the finiſhing of his figures, till he had each of the bones ſeparately engraved of the natural ſize, which employed him till the year 1733, when he returned to the figures. The engraver having then examined all the bones according to their poſition in the figures, ſupplied every deficiency he could obſerve.

THE drawings being thus compleated, Albinus, ſtimulated both by an affection to the work, and an earneſt deſire to improve anatomy, propoſed, as ſoon as they ſhould be engraved, to try if he could perfect what he had conceived, by adding the muſcles to them. Neither was he unprovided for this attempt; as, from the time that the firſt draughts of the ſkeleton were made, he, by the conſent of his pupils, every year traced the muſcles carefully, in order to obſerve more particularly their poſition, connection, figure, thickneſs, and ſubſtance, and carefully preſerved all of them he could in a proper liquor, together with the bones, and other parts to which they are connected. Theſe were all choſen from the beſt ſubjects; ſo that, in proceſs of time, having collected a great number of detached obſervations, he digeſted and compoſed from them his hiſtory of the Muſcles; ſince the publication of which, he has added many improvements that were ſuggeſted by his frequent diſſections.

THUS prepared, and animated with firmer reſolution, and more ſanguine hopes, he began to add the muſcles to the figures of the ſkeleton in the year 1738. From a ſubject furniſhed with large and thick muſcles, and upon a faint impreſſion of the outline of the figure of the ſkeleton, he had drawn the external layer of the muſcles of the trunk, neck, and extremities; thoſe that were ſituated below them were taken from other ſubjects as like the firſt as poſſible; and the whole was adapted to the figure of the ſkeleton. But, in delineating the external layers of the muſcles, it was difficult to diſcover their proper poſition with reſpect to the ſkeleton, becauſe moſt part of it was covered by them. Although much care and attention were exerted; yet, as the internal layers, by the ſkeleton's being more expoſed, ſhowed what was defective, the external layers were afterwards, by this means, corrected.

* Euſtachius both drew and engraved his Tables.

THERE are two kinds of tables in which the whole work is comprehended: The firſt contains the general connection and diſpoſition of the muſcles over the whole body; and the other contains the figures of each muſcle when ſeparated from the reſt. The firſt ſet of tables exhibits four fore, and as many back views, and a ſide view of the whole body. In the fore and back views, all the different layers of the muſcles are ſucceſſively delineated; and, although, from theſe the ſituation of the muſcles on the ſides may be tolerably well underſtood, yet he has added a ſide view of the external layer, that his ſyſtem might appear full and diſtinct. He has likewiſe delineated, apart, ſome claſſes of muſcles, ſituated in the cavities of the orbit, under the jaws, about the pelvis, and in the ſoles of the feet, as theſe could not be properly expoſed in the views of the whole body.

THE figures of the ſingle muſcles are conſiderably larger than thoſe of the general tables, by which means they repreſent every part more fully and accurately.

HAVING thus given a ſhort ſketch of the nature of the work, and of the labour and attention with which it was executed, we ſhall conclude with a few remarks concerning the preſent edition.

1. THE former editions of Albinus are of ſuch an enormous ſize, that they can neither be eaſily arranged in a library, nor read without ſtanding and ſtooping. To obviate this inconveniency, after perceiving that all the parts and characters could be expreſſed with equal diſtinctneſs, the preſent ſize was adopted.

2. IN the London edition, as well as in that publiſhed by Albinus himſelf, the ſmall Roman characters are employed in the explanations, and, to correſpond with them, the ſmall Italic letters are engraved on the plates; which is a great embaraſſment to the ſtudent. This impropriety we have avoided, by making the characters in the explanations the ſame with thoſe in the tables. But, in the former editions, a ſtill greater difficulty ariſes from the frequent uſe of the Greek alphabet; many of the letters of which are ſo inaccurately repreſented in the engraving, that, though the reader ſhould have a familiar acquaintance with the Greek, unleſs he be likewiſe maſter of the ſubject, he will be often at a loſs to trace out the characters he is in queſt of. Tho' theſe faults might have been corrected in this edition, it was thought more expedient, for the eaſe of thoſe who are not verſant in the Greek, to ſubſtitute Italic capitals in the place of the Greek capitals, and ſmall Italic letters in place of the ſmall Greek.

To render this edition of ſtill more utility, we have added to the deſcriptions of the ſeparate muſcles, a ſhort account of their uſes in the ſyſtem, in hopes that the giving reaſons for the particular figure, ſituations, and connections of each muſcle will be both more alluring to the ſtudent, and leave a deeper impreſſion of them on his mind.

THE outlines are likewiſe engraved in a bolder manner than in the original, in order to make the expreſſion of the different parts more diſtinct and apparent.

N. B. When the work is finiſhed, for the more ready conſulting the tables, the explanations will likewiſe be printed off in an octavo ſize, and ſold ſeparately, at a moderate price.

TAB. I.

A Bell Sculp.

THE

First Anatomical Table

OF THE

HUMAN SKELETON

EXPLAINED.

THIS firſt Table contains chiefly a front view or figure of the Human Skeleton; whereunto are added ſome of the Ligaments and Cartilages, without which the connection or joints of the Bones would be interrupted.

In the Head.

A The os frontis, or forehead bone.

B B The ſuperciliar foramina or holes, tranſmitting each a ſmall artery and nerve out of the orbit, to the frontal muſcles: The left of theſe holes is entire; but the right is partly abſent, forming only a kind of notch.

C D The coronal ſuture. C the part of it which makes a ſerrated or true ſuture: D the part which is ſquamoſe or like a fiſh-ſcale.

E The left parietal bone.

F A ſquamoſe or ſcale-like ſuture, which is formed by the conjunction of the parietal with the temporal bone.

G A ſquamoſe ſuture, formed by a meeting of the parietal bone with the largeſt lateral proceſs of the multiform or ſphenoidal bone.

H A ſquamoſe ſuture, formed by a conjunction of the os frontis with the largeſt lateral proceſs of the multiform bone.

I The largeſt lateral proceſs of the multiform or ſphenoidal bone.

K A ſuture common to the os ſquamoſum or temporale with the largeſt lateral proceſs of the multiform bone.

L The ſquamoſe or ſcale-like part of the temporal bone.

M The bony entrance or paſſage of the ear,

N The maſtoide or mammillary proceſs of the temporal bone.

O Zygomatic or jugal proceſs of the temporal bone.

P A ſuture common to the jugal or cheek bone, with the zygomatic proceſs of the temporal bone.

Q Q The oſſa jugalia, or cheek bones.

R R Sutures which conjoin the frontal bone with the cheek bones, near the ends of the eye brows.

S S Sutures formed by the union of the cheek bones with the upper jaw bones.

T T Parts of the cheek bones which help to form the orbits or ſockets for the eyes.

Betwixt T and W is a ſuture formed in the orbit by a conjunction of the cheek bone with the upper jaw bone.

Betwixt T and c: T and c appear ſutures in common to the cheek bones with the forehead-bone, within the orbits or holes for the eyes.

Betwixt T and Y: T and Y appear ſutures joining the cheek bones to the largeſt lateral proceſs of the multiform bone.

V V A channel appearing in the bottom of the orbits or holes of the eyes, which opens to the cheek (at t) and tranſmits the upper maxillary branch of the guſtatory nerve to the lips, palate, &c.

W X Part of the upper jaw bone belonging to the bottom of the orbit of the eye.

Betwixt W and X appears a ſuture running by the channel V, and extended along the bottom of the orbit of the eye. This ſuture paſſing over the lower margin of the orbit is extended towards the opening the ſaid channel (at t) in the cheek.

Between X and d is a ſuture common to the upper jaw bone and the os planum (d) of the multiform bone.

Between X and e is a ſuture common to the upper jaw bone and the os unguis. (e f)

Y Y The orbitary ſurfaces of the largeſt lateral proceſſes of the multiform or ſphenoidal bone.

Betwixt Y and c: Y and c appear ſutures common to the largeſt lateral proceſſes of the multiform bone with the frontal bone, in the orbits of the eyes.

Z The foramen lacerum or hole through which the third pair of nerves of the brain, together with the fourth, ſixth, and firſt branch of the fifth pair, paſs out of the ſkull into the orbit for the muſcles of the eye.

a The thin proceſs of the multiform or ſphenoidal bone.

b The hole through which the optic nerve paſſes out of the ſkull into the orbital cavity, accompanied with a branch of the internal carotid artery.

Betwixt a and c appears a ſuture within the orbit, common to the frontal bone with the thin proceſs of the multiform bone.

Between a and d is a ſuture common to the os planum and the thin proceſs of the multiform bone.

c c Parts of the frontal bone belonging to the orbits of the eyes.

Betwixt c and d is a ſuture common to the os planum and frontal bone.

Between c and e f is a ſuture common to the frontal bone with the os unguis.

d The os planum of the multiform bone.

Betwixt d and e is a ſuture common to the os planum with the os unguis.

e f The os unguis; in which f denotes a ſinus or cavity belonging to the naſal canal.

Betwixt f and g is a ſuture common to the os unguis with the naſal proceſs of the upper jaw bone.

g g The naſal proceſſes of the upper jaw bones.

Betwixt g and k: g and k appear ſutures common to the naſal bones with the naſal proceſſes of the upper jaw bones.

h A ſuture common to the frontal bone with the naſal proceſs of the upper jaw bone.

i i Sutures common to the frontal and naſal bones.

k k The oſſa naſi, or bones of the noſe.

Betwixt k and k is a ſuture common to the two naſal bones.

l The interior part of the naſal proceſs of the upper jaw bone, belonging to the cavity of the noſe.

m m The lower turbinated or ſpongy bones.

Betwixt l and m, on the right ſide, is a ſuture formed by the conjunction of the lower ſpongy bone with the upper jaw bone.

n o A thin plate of the ethmoidal or ſieve-like bone, which makes part of the (ſeptum narium) partition of the noſtrils. o the extremity of the ſaid bony plate which joins to the cartilaginous or griſtly part of the partition.

p The os vomer, or plow-ſhare bone.

Betwixt n and p is a kind of ſuture formed by the connection of the vomer (p) with the plate of the ethmoidal or cribriform bone.

q Part of the upper jaw bone, which belongs to the bottom of the noſtrils.

r A ſuture common to the upper jaw bones.

s s The upper jaw bones, next the cheeks.

t t The foramina or holes of the channels (V V) which paſs along the bottom of the orbits of the eyes.

u The pterygoide or winged proceſs of the multiform bone.

w x y z The lower mandible or jaw bone. x a hole out of which paſs a nerve of the fifth pair and blood-veſſels to the chin, after paſſing through a canal within the jaw. y the acute proceſs. z the neck of the obtuſe proceſs or head, by which the mandible is articulated to the temporal bone.

a The cartilage in the joint of the lower jaw, interpoſed betwixt its head and the temporal bone.

b c d e f g h i: b c d e f g h i The left teeth in each of the jaws. *b b* The firſt of the inciſive or cutting teeth. *c c* the ſecond inciſive teeth. *d d* the canine or dog-teeth. *e e* the firſt of the grinders. *f f* the ſecond. *g g* the third. *h h* the fourth. *i i* the fifth, (called dentes ſapientiae) or eye-teeth.

In the Spine.

k The body of the atlas, or vertebra of the ſpine which ſuſtains the head; and in this place it is connected to the epiſtrophaeus, or next vertebra.

l The body of the epiſtrophaeus where it ſuſtains the atlas.

m The lower oblique proceſs of the fifth vertebra of the neck.

n o p q The fourth vertebra of the neck. *n* its upper oblique proceſs. *o* its lower oblique proceſs. *p* its tranſverſe proceſs. *q* its body.

r The lateral opening betwixt the third and fourth vertebra.

s s, &c. The ligaments which are interpoſed betwixt the bodies of the vertebrae, and which tie them one to the other.

t u u w w x The third vertebra of the neck. *t* the body. *u u* the tranſverſe proceſſes. *w w* the upper oblique proceſſes. *x* the lower oblique proceſs.

y y z z C The ſecond vertebra of the neck. *y y* the upper oblique proceſſes. *z z* the tranſverſe proceſſes. *C* the body.

D D H H L L X The firſt vertebra of the neck. *D D* the upper oblique proceſſes. *H H* the tranſverſe proceſſes. *L L* the lower oblique proceſſes. *X* the body.

P P S W W Y The twelfth vertebra of the back. *P P* its upper oblique proceſſes. *S* the tranſverſe proceſs. *W W* the lower oblique proceſſes. *Y* the body.

O a a b b The eleventh vertebra of the back. *O* the body. a a the upper oblique proceſſes. b b the tranſverſe proceſſes.

c The tranſverſe proceſs of the ſixth vertebra of the back.

d d e e The third vertebra of the back. d d the body. e e the tranſverſe proceſſes.

f g g The ſecond vertebra of the back. f its body. g g its tranſverſe proceſſes.

h The body of the firſt vertebra of the back.

i k k The fifth vertebra of the loins. i its body. k k its tranſverſe proceſſes.

l m m n The fourth vertebra of the loins. l its body. m m its tranſverſe proceſſes. n its upper oblique proceſs.

o p p The third vertebra of the loins. o its body. p p its tranſverſe proceſſes.

q q r r s The ſecond vertebra of the loins. q q the upper oblique proceſſes. r r its tranſverſe proceſſes. s its body.

t t u u v v w The firſt vertebra of the loins. t t its upper oblique proceſſes. u u its tranſverſe proceſſes. v v its lower oblique proceſſes. w its body.

x x y y z z z z z z A A A A The os ſacrum or great bone of the ſpine. x x the upper oblique proceſſes of its firſt vertebra. y y the ſides of this bone. z z z: z z z the three upper and anterior foramina or holes to tranſmit the nerves on each ſide. A A A A the four upper bodies of this bone; betwixt which are bony lines that were formerly ligaments.

B The fourth ſmall bone of the coccyx.

In the Thorax, Clavicles, and Scapulae.

C D E F The ſternum or breaſt bone conſiſting of three parts, of which C is the upper, D the middle, and E the lower; to which laſt is fixed the enſiform cartilage F.

G H The ligaments by which the bones of the ſternum are connected together.

I K L M. I K L M The firſt ribs. K the ſmall head by which it is articulated with the tranſverſe proceſs of the twelfth vertebra of the back. L the former part of the ſaid head, which is connected with the body of the ſame twelfth vertebra of the back. M its cartilaginous end by which it is continued to the ſternum.

N N O P. N N O P The ſecond ribs. O the former part by which it is articulated with the bodies of the eleventh and twelfth vertebrae of the back. P the cartilaginous end of this rib.

Q Q Q R. Q Q Q R The third ribs. R its cartilaginous end.

S S S T. S S S T The fourth ribs. T its cartilaginous end.

V V V V W X. V V V V W The fifth ribs. W its cartilaginous end, ſpreading and adhering (on the left ſide X) to the cartilage belonging to the ſixth rib.

Y Y Y Y Z *C*. Y Y Y Y Z *C* The ſixth ribs. Z its cartilaginous end, ſpreading in the part *C*, and adhering to the cartilage of the ſeventh rib.

D D D H L. *D D D H L* The ſeventh ribs. *H* the cartilaginous end which grows broad at *L*, and is attached to the cartilage of the eighth rib.

X X X X P S. *X X X X P* The eighth rib. *P* the cartilaginous end, which in ſome bodies ſpreads in the part *S*, and is attached to the cartilage of the ſeventh rib.

W W W W Y. *W W W Y* The ninth rib. *Y* its cartilaginous end.

O O O O O O a. *O O O O O O a* The twelfth rib. *a* its cartilaginous end.

b b b b c. *b b b b c* The eleventh rib. *c* its cartilaginous end.

d e. *d e* The twelfth rib. *e* its cartilaginous end.

f g i. *f g i* The clavicles or collar-bones. *g* the head which is ſuſtained by the ſternum. *i* the head faſtened to the upper proceſs of the ſcapula or blade-bone.

h h Cartilages interpoſed betwixt the joints of the clavicles with the ſternum.

k k The cartilages interpoſed betwixt the joints of the collar-bones and the upper proceſſes of the ſcapulae or blade-bones.

l l l l l l l l l m n o p q. *l l l l l l l l l m n o p q* The ſcapulae or ſhoulder-blades. *m* its ſpine or ridge. *n* its coracoide or crows-bill proceſs. *o* its acromion or upper proceſs. *p* the neck. *q* the cartilaginous cruſt which increaſes the neck.

In the Arms, Fore-arms, and Hands.

r s t u w x y z a b. *r s t u w x y z* a b The humeri or bones of the arms. *r* the head, incruſted with a ſmooth cartilage. *s* the greater unequal protuberance in the upper head of this bone. *t* the leſs unequal protuberance of the ſame. Betwixt theſe protuberances is a ſinus, through which paſſes the tendon of the longer head of the biceps muſcle of the arm. *w* a ſinus or cavity which receives the upper head of the radius, at the time when the fore-arm is bent as much as poſſible. *x* a ſinus that receives the upper head of the ulna, when the cubit is bent as much as it can be. *y* a round head incruſted with a ſmooth cartilage, and articulated with the ulna. *z* another round head incruſted with a ſmooth cartilage, and articulated with the radius. a the leſſer condyle. b the greater condyle.

c d e f g. c d e f g The ulna or greater bone in each fore-arm. d its upper head, upon which appears a roughneſs, wherein is inſerted the brachiaeus internus muſcle. e f its lower head which ſuſtains the radius; and here f denotes an arch or concavity lined with a ſmooth cartilage.

g A ſtyloide or pointed proceſs in the lower head of the ulna.

h i n o p q. h k l m The radius or leſs bone in each fore-arm. i its upper head. k the circumference or rim of its upper head incruſted with a ſmooth cartilage. l a protuberance, at the poſterior part of which the tendon of the biceps muſcle of the arm is inſerted, which bends the fore-arm toward the body when the palm of the hand is downwards. m n o p q the lower head of this bone. n denotes a ſinus or groove through which paſs the tendons of the long abductor, and leſs extenſor muſcles of the thumb. o a ſinus through which goes the tendon of the longer radialis externus muſcle. p a ſinus through which goes the tendon of the ſhorter radialis externus muſcle. q a ſinus for the tendon of the greater extenſor of the thumb.

r s t. r s The navicular bones of the wriſts. s the convexity or head which is articulated with the radius, incruſted with a ſmooth cartilage. t a convexity covered with a ſmooth cartilage, and received by the multangular bones.

u w. u The lunar bones of the carpus or wriſt. w a convexity incruſted with a ſmooth cartilage, and articulated with the radius.

x x The cuneiform or wedge-like bones of the wriſts. In the right hand this bone appears with a ſmooth cartilaginous cruſt, by which it is articulated with the lunar bone and with the ulna.

y The roundiſh or pea-like bone of the wriſt.

z A A B. z A the unciform or hook-like bones. A A the part which is covered with a ſmooth cartilage, articulated to the cuneiform and lunar bones. B the unciform proceſs.

C D. C D Oſſa magna vel capitata, the great or round-headed bones of the wriſts. D the round head incruſted with a ſmooth cartilage, and articulated with the navicular and lunar bone.

E E The trapezoide, cubical, or leaſt of the multangular bones in the wriſts.

F F The greater trapezial or multangular bones of the wriſts.

G H. G H The metacarpal bones of the thumbs. H the lower head incruſted with a ſmooth cartilage, by which it is articulated with the firſt bone of the thumb, and with the ſeſamoid bones, I K.

I K The ſeſamoid bones (*i. e.* like ſeſamum ſeeds) fixed at the joint of the thumb with its metacarpal bone.

L M. L M The firſt bones of the thumbs. M the lower head incruſted with a ſmooth cartilage, by which it is articulated with the laſt bone of the thumb.

N A ſeſamoid bone placed at the laſt joint of the thumb.

O O The laſt bones of the thumbs.

P Q R S T: P Q R S T The metacarpal bones of the hands. P the metacarpal bone of the index or firſt finger. Q that of the middle finger. R that of the ring finger. S that of the auricular or little finger. T the lower head, incruſted with a ſmooth cartilage in the firſt joint of the finger: And the ſame holds in the reſt of theſe bones.

V W Small ſeſamoid bones ſometimes found at the firſt joints of the index and little finger.

X Y Z *C D*: X Y Y Z Z *C D* The firſt phalanx, order, or row, of bones in the fingers. X that of the index. Y that of the middle finger. Z that of the ring finger. *C* that of the little finger. *D* the lower head, covered with a ſmooth cartilaginous cruſt, at its articulation or joint with the ſecond bone of the finger: The ſame holds alſo in the reſt of the fingers.

H L X P S: *H L X P S* The bones in the fingers of the ſecond phalanx or order. *H* that of the index. *L* that of the middle finger. *X* that of the ring finger. *P* that of the little finger. *S* the lower head incruſted with a ſmooth cartilage, and jointed to the third or laſt bone of the finger: And ſo in the reſt of theſe bones.

W Y O a. *W Y O a* The bones of the third phalanx or laſt order of the fingers. *W* that of the index. *Y* that of the middle finger. *O* that of the ring finger. *a* that of the little finger.

In the Pelvis Legs, and Feet.

b c d e e f g h i i k l m. *b c d e e f g h i i k l m* The innominate or baſon bones, including three others. *b c d* the os ilium or flank-bone. *c* the ſpine or ridge of that bone. *d* a tubercle from whence ariſes the rectus or ſtraight muſcle of the thigh. *e e f* the iſchion, or hitch-bone. *f* a ſinus or notch through which paſs the internal iliac, and great pſoas or lumbal muſcle. *g* the ſharp pointed proceſs of the iſchium. *h* the tubercle of the iſchium. *i i k l* the os pubis. *k* the ſpine or ridge of the os pubis, from whence ariſes the pectineus muſcle of the thigh. *l* a tubercle, into which is inſerted the lower and outer tendon of the double aponeuroſis of the oblique external muſcles of the abdomen. *m* the great foramen or hole of this bone.

n A cartilage or griſtle interpoſed betwixt the bones of the pubis, and connecting them together.

o p q r s t u w x y. *o p q r s t u w x y y* The thigh bones. *o* the head incruſted with a ſmooth cartilage. *p* the neck. *q* the greater trochanter or ſpoke. *r* a rough protuberance, to which is fixed a ligament that ſecures the joint of the hip. *s* the leſs trochanter or ſpoke. *u* the outer condyle of the lower head. *w* the inner condyle. *x* a ſinus or cavity incruſted with a ſmooth cartilage next the joint of the patella or knee-pan bone. *y* ſo far extends the ſmooth cartilaginous cruſt that covers the condyles or lower heads of the thigh bone, at its juncture with the tibia, or great bone of the leg.

z z The patellae or knee-pan bones.

a b. a b The interior ſemilunar cartilages in the joints of the knees: At b b, backwards, theſe turn into ligaments, and are inſerted into the tibia.

c d. c d The outer ſemilunar cartilages, turning to ligaments in the back part of the joint d d, which are inſerted into the tibia.

e f g h i k l. e f g h i k l The tibia or great bones of the legs. e the upper head. f g ſmooth cartilaginous incruſtations covering the top of the tibia, next the femur, in the joint of the knee. h the protuberance into which is fixed the ligament of the patella, faſtening the bone to that tibia. i the ſpine or edge of the tibia. k l its lower head. l the inner ancle.

m n o. m n o The fibulae or ſlender bones of the leg. m the upper head. n the ſpine or ridge. o the lower head, which makes the outer ancle.

p q r. p q r The aſtragalus or cockal bone. q the ſmooth cartilaginous cruſt that covers its convexity next the bones of the leg to which it is jointed. r a like cruſt covering its head or fore part.

s t. s t The calcanei or heel-bones. t the part that ſuſtains the neck of the aſtragalus.

u u The navicular bones of the tarſus or ancle.

v v The greater cuneiform bones of the tarſus.

w w The ſmall cuneiform bones of the tarſus.

x x The middle cuneiform bones of the tarſus.

y The cuboid or cubical bone of the tarſus.

z A B C D E: z A B C D E The bones of the metatarſus or inſtep. z that of the fourth or little toe. A that of the third. B of the ſecond. C of the firſt, and D of the great toe. E a ſmooth cartilaginous cruſt that covers the lower head at its juncture with the firſt bone of the great toe: Which cruſt is alſo in the reſt of theſe bones.

F G: F Seſamoid bones placed at the junctures of the great toes with their metatarſal bones.

H H The firſt bones of the great toes.

I I The laſt bones of the great toes.

K L M N: K L M N The bones of the firſt phalanx or order of the ſmaller toes. K that of the firſt toe. L of the ſecond. M of the third, and N of the fourth or little toe.

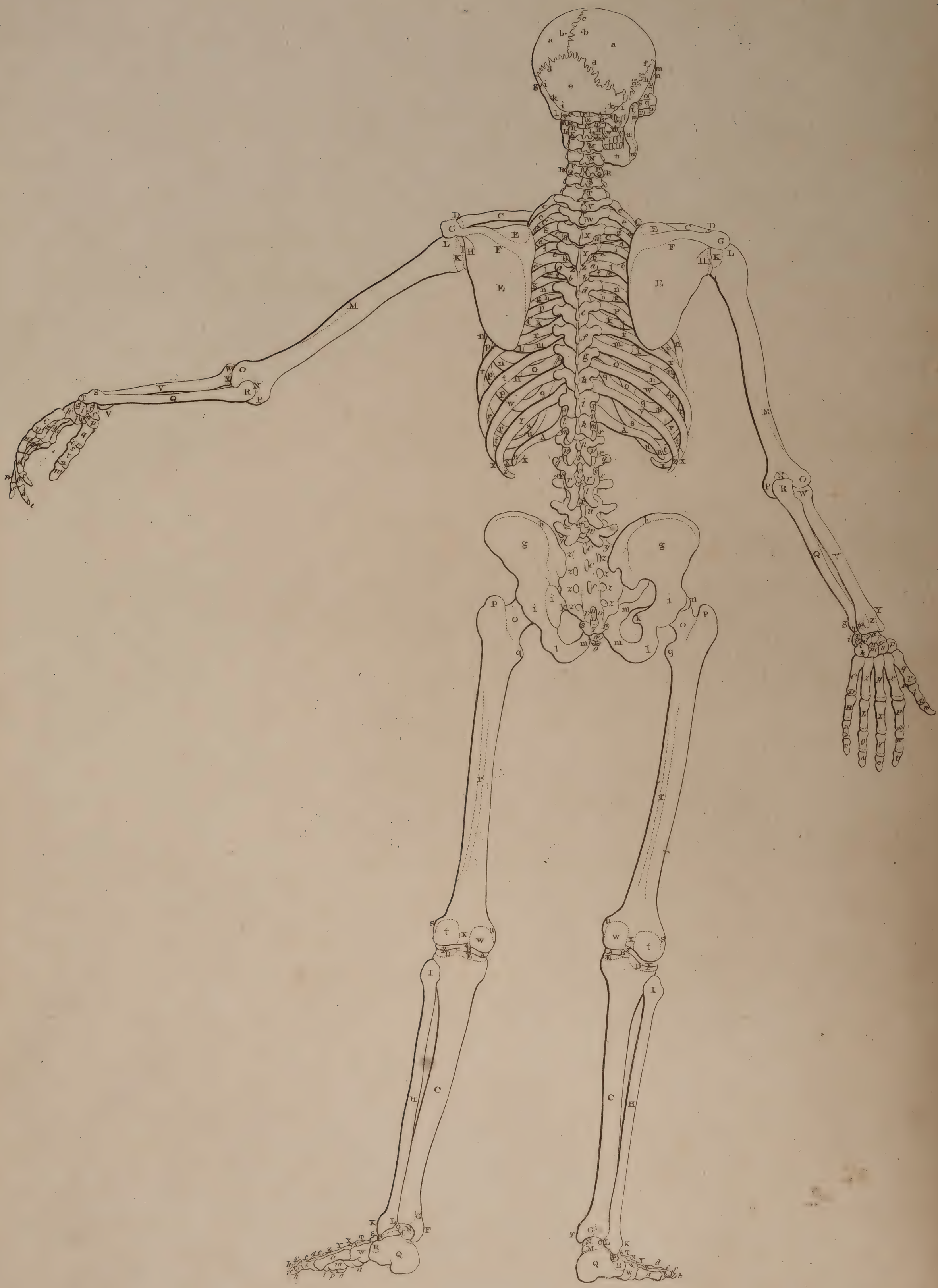
O P Q R: O P Q R The bones of the ſecond phalanx or order of the ſmaller toes. O that of the firſt toe. P that of the ſecond. Q of the third, and R that of the fourth or little toe.

S T V W: S T V W The bones of the laſt phalanx or third order of the ſmaller toes. S that of the firſt toe. T that of the ſecond. V of the third, and W of the fourth or little toe.

TAB. I.

A. Bell Sculp.t Edin.r

TAB. II.



A. Bell Sculp.

THE

Second Anatomical Table

OF THE

HUMAN SKELETON

EXPLAINED.

THIS Table repreſents a back-view of the former Skeleton, and in the ſame poſition. We have likewiſe here added ſome of the ligaments and cartilages, where they appeared neceſſary to make up or continue the joints of the bones.

In the Head and Spine.

a a The verticle or parietal bones.
b b The verticle foramina or holes tranſmitting ſmall veins to the longitudinal ſinus.
c The ſagittal or longitudinal ſuture.
d d The lambdoid or occipital ſuture.
e The occipital bone.
f The ſquamoſe ſuture, formed by a conjunction of the ſcaly part of the temporal and parietal bones.
g g True ſutures, formed by a conjunction of the maſtoid or dug-like proceſſes of the occipital bone with the parietal bones.
h The os ſquamoſum, or ſcaly part of the temporal bone.
i i. i i Appendages of the lambdoid ſuture.
k k Foramina or holes, through which paſs branches of the internal jugular veins, to the lateral ſinuſſes of the dura mater.
l l The maſtoide or mammillary proceſſes of the temporal bones.
m The frontal or forehead bone.
n A ſuture formed by the conjunction of the jugal with the frontal bone, near the extremity of the eye-brow.
o A ſuture made by the conjunction of the jugal proceſs of the temporal bone with the cheek-bone.
p p The os jugale or cheek bone.
q The jugal proceſs of the temporal bone.
r Os maxillare ſuperius, or the upper jaw-bone.
Betwixt r and p is a ſuture formed by a conjunction of the jugal or cheek-bone with the upper jaw-bone.
s A cartilaginous plate interpoſed betwixt the joint of the lower jaw with the temporal bone.
t u u u u The lower jaw or mandible. t the head which is joined to the temporal bone.
w w Thoſe parts of the upper jaw-bones which ſuſtain the palate or roof of the mouth.
The teeth in the jaws appear evidently of themſelves.
x x The ſtyloide or pointed proceſſes of the temporal bones.
y y z A B C D D E The atlas, or uppermoſt vertebra, that ſuſtains the head. y y its tranſverſe proceſſes. z a hole in the tranſverſe proceſs. A an arch or curvature found in ſome bodies: And this, with the ſinus through which the vertebral artery is inflected behind the body of the atlas, makes the hole B, through which that artery penetrates into the great cavity of the vertebrae; as at other times it paſſes through a ſinus or notch, marked C in the left ſide. C a ſinus or notch in that part of the body of the atlas where it ſuſtains the head; through which ſinus the vertebral artery bends itſelf, when it is about to enter the great ſpinal cavity of the vertebrae. D D the lower parts of its body, by which it is connected to the epiſtrophaeus. E a rough protuberance, which is inſtead of a ſpinal proceſs, and from whence ariſe the (muſculi recti poſtici minores capitis) ſmaller, poſterior, ſtraight muſcles of the head.
F G H H I I K K L The epiſtrophaeus, or vertebra upon which the head and atlas turn laterally. F its axis. G the inner part of its body. H H the two vertices or turning points which ſuſtain the atlas. I I The tranſverſe proceſſes. K K the lower oblique proceſſes. L the ſpinal proceſs.
M N Two of the vertebrae of the neck. M the fifth. N the fourth in order, counting upwards.
O P P Q Q R R The third vertebra of the neck. O the ſpinal proceſs. P P the upper oblique proceſſes. Q Q the lower oblique proceſſes. R R the tranſverſe proceſſes. From hence the parts of the other vertebrae of the neck may be likewiſe underſtood.
S T The two lower vertebrae of the neck. S the ſecond, and T the firſt in order.
V W X Y Vertebrae of the back. V the twelfth. W the eleventh. X the tenth. Y the ninth.
Z Z *a a b b c* The eighth vertebra of the back. Z Z its upper oblique proceſſes. *a a* the tranſverſe proceſſes. *b b* the lower oblique proceſſes. *c* the ſpinal proceſs. From this the parts of the other vertebrae of the back may be underſtood.
d e f g h i Vertebrae of the back. *d* the ſeventh. *e* the ſixth. *f* the fifth. *g* the fourth. *h* the third. *i* the ſecond.
k l l m m m The firſt vertebrae of the back, in which *l l* denote the tranſverſe proceſſes, as if they were inflected behind the junctures of the upper oblique proceſſes of this vertebra with the lower oblique proceſſes of the ſecond vertebra. *m m m* its body.
n The fifth vertebra of the loins.
o p p q q r r s s s The fourth vertebra of the loins. *o* the ſpinal proceſs. *p p* the upper oblique proceſſes. *q q* the tranſverſe proceſſes. *r r* the lower oblique proceſſes. *s s s* the body of this vertebra. The parts of the other vertebrae of the loins may without difficulty be underſtood from this.
t u w The remaining vertebrae of the loins. *t* the third. *u* the ſecond, and *w* the firſt of them, reckoning upwards with Albinus, which is contrary to the cuſtom of Britiſh Anatomiſts.
x x, &c. The ligaments that are interpoſed betwixt the bodies of the vertebrae and connect them one to the other.
y y z z z z z z z z C C C D D H L The os ſacrum or great bone of the ſpine. *y y* the upper oblique proceſſes. *z z z z z z z z* the poſterior foramina or holes. *C C C* the ſpinal proceſſes. *D D* the lower oblique proceſſes, with which are conjoined the upper oblique proceſſes of the firſt bone of the coccyx. *H* the body of the fourth of thoſe vertebrae which compoſe the os ſacrum. Betwixt *H* and *L* is a bony part which was formerly a ligament, intervening and contiguous with the bodies of the fourth and fifth of theſe falſe vertebrae, *L* the body of the fifth vertebra of the os ſacrum.
Betwixt *L* and *X* is a ligament, interpoſed between the bottom of the os ſacrum and coccyx, and tying them together.
X P S The firſt bone of the os coccygis. *X* the body. *P* the tranſverſe proceſs; the fellow to which is alſo in the other ſide. S the upper oblique proceſs; the fellow to which is alſo in the other ſide.
Betwixt *X* and *W* is a ligament that ties together the bodies of the firſt and ſecond bones of the coccyx.
W Y O The lower bones of the coccyx, *W* the ſecond, *Y* the third, *O* the fourth.

In the Thorax and Upper Extremities.

a a b b The ſternum or breaſt-bone.
c c d d. c c d d The firſt or uppermoſt ribs. d d the cartilaginous part.
e e e f. e e e f The ſecond ribs. f the cartilaginous part.
g g h. g g g g h The third ribs. h the cartilaginous part.
i i k. i i k the fourth ribs. k the cartilaginous part.
l l m. l l m The fifth ribs. m the cartilaginous part.
n n n n o o. n n n n o The ſixth ribs. o the cartilaginous part.
p p p p p q q. p p p p q q The ſeventh ribs. q the cartilaginous part.
r r r s. r r r r s The eighth ribs. s the cartilaginous part.
t t t u. t t u The ninth ribs. u the cartilaginous part.
w x x. w x x x The tenth ribs. x the cartilaginous part.
y z. y z The eleventh ribs. z the cartilaginous part.
A B. A B The twelfth ribs. B the cartilaginous part.
C C C C. C C C The clavicles or collar bones.
D D Cartilaginous plates faſtened betwixt the junctures of the clavicles with the acromia or upper proceſſes of the ſcapulae or ſhoulder blades.
E E F G H I. E E F G H I The ſcapulae or blade-bones. F the ſpine. G the acromion or upper proceſs. H the neck. I the cartilage that lines the cavity of its neck.
K L M N O P. K L M N O P The humeri or bones of the arms. K the head incruſted with a ſmooth cartilage where it is jointed or received into the cavity of the ſcapula. L the greater unequal protuberance of the upper head. M a ſinus or groove through which the brachial artery, vein, and nerve paſs along. N a ſinus or cavity that receives the olecranon or head of the ulna when the fore-arm or cubit is extended. O the leſſer condyle, and P the greater condyle or protuberance in the lower head of the humerus.
Q R S T. Q R S T The ulna or greater bone of the cubit. R the protuberance of its upper head, called the olecranum or elbow. S its lower ſmall head that ſuſtains the radius. T the pointed proceſs of its lower head.
V V W X. V X Y Z *a b* The radii or leſs bones of the cubit. W X the upper head. X the circumference or rim of the upper head incruſted with a ſmooth cartilage which moves in the concavity of the ulna. Y the ſinus which contains the tendons of the long abductor of the thumb, and of the leſs extenſor. Z a ſinus that receives the tendons of the outer radial muſcles. *a* the ſinus or groove that conducts the tendon of the larger extenſor of the thumb. *b* the ſinus or groove that conducts the tendons of the common extenſor of the fingers, with that of the extenſor proper to the little finger, and to the index or firſt finger.
c d e. c The navicular bones of the wriſts. *d* the ſmall head incruſted with a ſmooth cartilage where it is joined to the radius. *e* the head covered with a ſmooth cartilage that meets the multangular bones.
f f The lunar bones, that on the right hand appears covered with a ſmooth cartilaginous cruſt where it is jointed to the radius.
g h. g The oſſa triquetra or cuneiform bones of the wriſts. *h* the part covered with a ſmooth cartilage which is jointed with the unciform bone (*k l*).
i i The oſſa ſubrotunda, piſiformia, or pea-like bones.
k l. k l The unciform bones of the carpus. *l* the ſurface incruſted with a ſmooth cartilage that is jointed with the cuneiform bone (*g*).
m n. m Oſſa magna vel capitata, the great or round headed bones of the wriſts.

n the round head incruſted with a ſmooth cartilage by which it is jointed to the lunar and navicular bone.

o o The trapezoid or leſs of the multangular bones in the wriſts.

p p The trapezial or great multangular bones of the carpus.

q r. q The metacarpal bones of the thumbs. *r* the lower head covered with a ſmooth cartilaginous cruſt, where it is jointed to the firſt bone of the thumb, and with the ſeſamoid bones. The ſame is alſo true of the left thumb.

s s The ſeſamoid bones placed at the joint of the thumb with its metacarpal bone.

t u. t u The firſt bones of the thumbs. *u* a ſmooth cartilaginous cruſt that covers the lower head where it is jointed to the laſt bone of the thumb.

w w The laſt phalanges or bones of the thumbs.

x y z C D. x y z C D The bones of the metacarpus or hand. *x* that of the index or firſt finger. *y* that of the middle finger. *z* that of the ring finger. *C D* that of the little finger. *D* the cartilaginous cruſt that covers its lower head where it is jointed to the bone of the firſt phalanx or order. The ſame holds in the reſt of theſe bones.

H L X P S H L X P The bones of the fingers of the firſt phalanx or order. *H* that of the little finger. *L* that of the ring finger. *X* that of the middle finger. *P S* that of the index or firſt finger. *S* a cartilaginous cruſt covering the lower head, where it is jointed to the bone of the ſecond phalanx: The ſame likewiſe holds in the other fingers.

W Y O a b. *W O* a The bones of the fingers of the ſecond phalanx or order. *W* that of the index. *Y* that of the middle finger. *O* that of the ring finger. a b that of the little finger. b part of the lower head at its joint with the bone of the third and laſt order, incruſted with a ſmooth cartilage. The like in the other fingers.

c d e f. c d e f The bones of the fingers of the third and laſt phalanx or order.

g h i k l m m. g h i k l m The oſſa innominata or haunch bones. g h the os ilium, hip or flank bone. h its ſpine or edge. i the iſchium or hitch bone. k the ſharp proceſs of the iſchium. l the tubercle or ſeat of the iſchium. m the os pubis.

n o p q r s t u w x. o p q r s t u w x The thigh bones. n the round head, which being incruſted with a ſmooth cartilage is received or jointed into the acetabulum or cavity of the haunch bone. o the neck. p the great trochanter or ſpoke. q the leſs trochanter. r the linea aſpera or roughneſs that is extended down the backſide of the thigh bone. s t the outer condyle or protuberance of the lower head of the femur, of which t denotes the part belonging to the joint of the knee, covered with a ſmooth cartilaginous cruſt.

u w the inner condyle; w the part of it that belongs to the joint of the knee incruſted with a ſmooth cartilage. x the ſinus or cavity betwixt the condyles.

y y The exterior ſemilunar cartilages which end in ligaments that are inſerted into the head of the femur and tibia in the joint of the knee, z z.

A A The interior ſemilunar cartilages, inſerted in the joint of the knee; and affixed to the tibiae or greater bones of the legs B B by their extremities, turned into ligaments.

C D E F G. C D E F G The tibiae or greater bones of the legs. D E parts of the upper head of the tibia, which being incruſted with a ſmooth cartilage, belong to the joint of the knee. F the inner ancle. G a ſinus or groove through which paſs tendons of the tibialis poſticus and long flexor of the toes.

H I K L. H I K L The fibulae or ſlender bones of the legs. I the upper head which is fixed to the tibia. K the outer ancle. L the ſinus or notch through which paſs the tendons of the long and ſhort peronei muſcles.

M N O P. M N O P The aſtragali or cockal bones. N O the ſmooth cartilaginous incruſtation that covers its convexity; and N denotes that part which is jointed to the tibia; O that which is jointed to the os perone or fibula. P its head.

Q R. Q R The calcanei or heel bones. R a protuberance at which the tendon of the peroneus longus muſcle is inflected.

S S The navicular bones of the tarſus or ancle.

T T The leſs cuneiform bones of the tarſus.

V V The middle cuneiform bones of the tarſus.

W W The cubical bones of the tarſus.

X Y Z *a*. X X Y Z *a* The bones of the metatarſus or inſtep. X that of the firſt of the ſmaller toes, Y that of the ſecond, Z of the third, and *a* that of the fourth or little toe.

b c d e. b c d The bones of the firſt phalanx or order of the ſmaller toes. *b* that of the fourth or little toe, *c* that of the third, *d* that of the ſecond, *e* of the firſt.

f g. f The bones of the ſecond order or phalanx of the ſmaller toes; *f* that of the fourth, *g* of the third.

h i k. h The bones of the third or laſt phalanx of the ſmaller toes; *h* that of the fourth or little toe, *i* of the third, *k* of the ſecond.

l The firſt bone of the great toe.

m The metatarſal bone of the great toe.

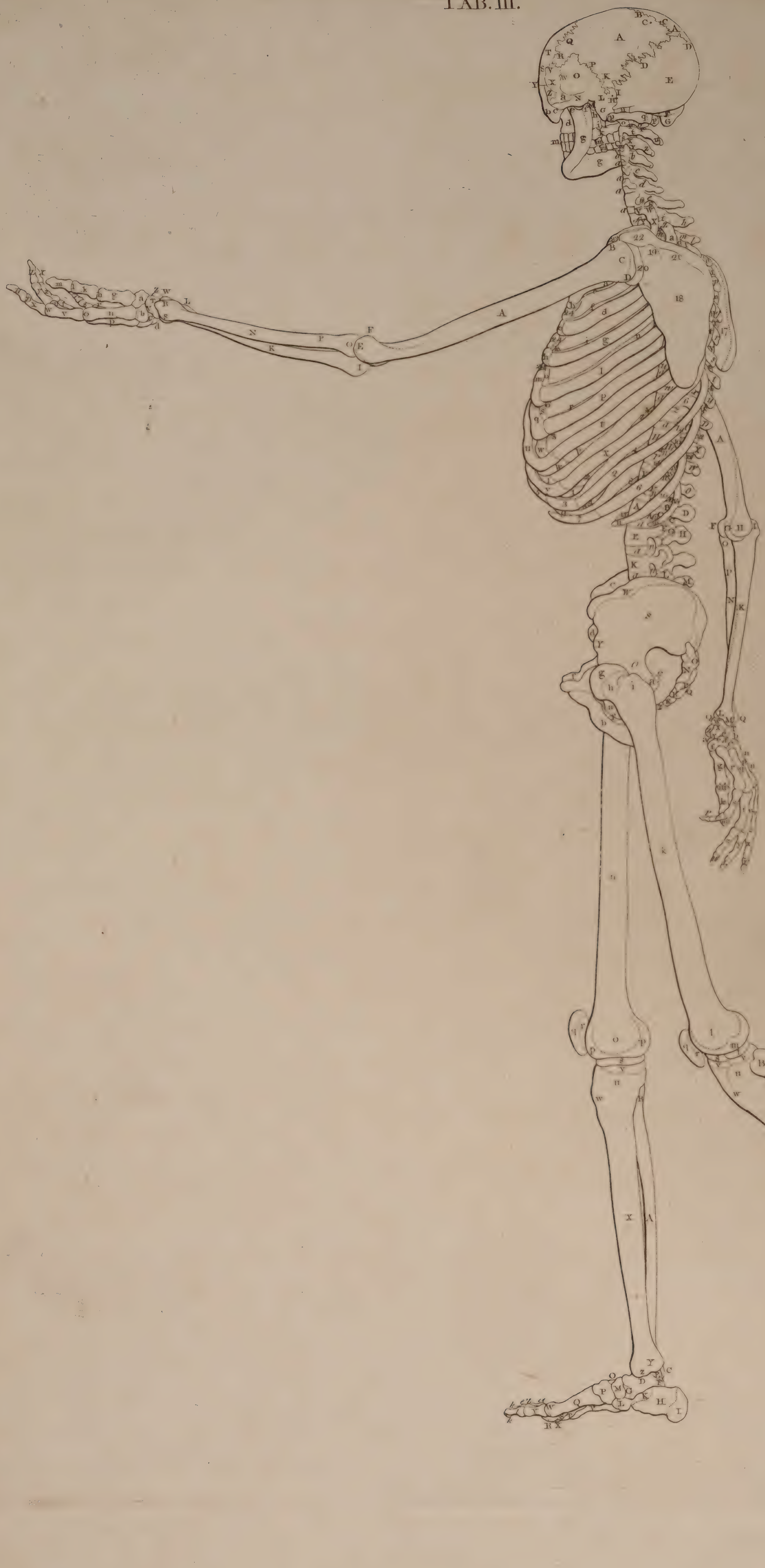
n The greater cuneiform bone of the tarſus.

o p The ſmall ſeſamoid bones that are placed at the joint of the great toe with its metatarſal bone. *o* the inner, and *p* the outer of theſe ſmall bones.

TAB. II.

A Bell Sculp.t

Tab. III.



A. Bell Sculp.

THE

Third Anatomical Table

OF THE

HUMAN SKELETON

EXPLAINED.

THIS Table repreſents a ſide-view of the ſame Skeleton, as before; but in a different attitude or poſition. And to this figure we have likewiſe, in ſome places, added ligaments and cartilages, where they ſeemed neceſſary to continue the joints of the bones.

In the Head and Spine.

A A The vertical or parietal bones.
B The ſagittal or longitudinal future.
C C The vertical foramina or holes tranſmitting ſmall veins to the longitudinal ſinus of the dura mater.
D D The lambdoid future.
E The occipital bone.
F G. G The mammillary proceſſes of the temporal bones. F a protuberance from whence ariſes the digaſtric muſcle of the lower jaw.
H Two foramina or ſmall holes; one in the maſtoid proceſs of the temporal bone, near the appendix of the lambdoid future: The other in the appendix itſelf of that future; through which laſt foramen a vein paſſes to the lateral ſinus of the dura mater.
I An appendix or addition to the lambdoid future.
K A true future, formed by a conjunction of the maſtoid part of the temporal bone with the parietal bone.
L The maſtoid or mammillary proceſs of the temporal bone.
M The bony meatus or entrance of the ear.
N The zygomatic or jugal proceſs of the temporal bone.
O The ſquamoſe or ſcaly part of the temporal bone.
P The ſquamoſe future, formed by a conjunction of the temporal with the parietal bone.
Q R S The coronal future. Q that part which is a ſerrated or true future. R S that part of the frontal bone which like a ſcale ſhoots under the parietal bone R. S the multiform or ſphenoidal bone.
T The frontal bone.
V The ſquamoſe future, formed by the conjunction of the multiform bone with the parietal bone.
W A future formed by the conjunction of the largeſt lateral proceſs of the multiform bone with the ſquamoſe part of the temporal bone.
X The largeſt lateral proceſs of the multiform bone.
Y A future common to the os frontis and cheek bone near the extremity of the eye-brow.
Z Part of the os jugale or cheek bone in the temporal cavity.
Below Z is a future common to the cheek bone with the upper jaw bone in the temporal cavity.
Betwixt Z and X is a future common to the cheek bone with the largeſt lateral proceſs of the multiform bone.
a The os maxillare ſuperius or upper jaw bone.
Betwixt a and X is a ſlit or aperture that is left betwixt the upper jaw, cheek, and multiform bone.
b The outer part of the os jugale or cheek bone.
c A future common to the cheek bone with the zygomatic proceſs of the temporal bone.
d The os maxillare ſuperius, or upper jaw bone.
e f g g The mandible or lower jaw. e its coronal or acute proceſs. f its condyle or head that is jointed with the temporal bone. Juſt above f appears the moveable cartilaginous plate that is interpoſed in the articulation of the lower jaw.
h i The concave part of the left winged proceſs of the multiform bone. i the little hook that ſupports and confines the tendon of the circumflex muſcle of the palate.
k l The baſis of the upper jaw bone. k that part which forms the gums or ſockets of the teeth. l that which is in the palate.
m m m The teeth in each of the jaws.
n o o p p q The atlas or uppermoſt vertebra. n the left part of its body, into which is received the coronoid proceſs of the occipital bone, which ſuſtains the head with a moveable joint. o o the two lower parts of its body by which it is faſtened with moveable articulations to the epiſtrophaeus. p p the tranſverſe proceſſes. q the protuberance or inequality that is inſtead of a ſpinal proceſs, and from whence ariſe the (recti poſtici minores capitis) the leſs poſterior and ſtraight muſcles of the head.
r r s t u The epiſtrophaeus or ſecond vertebra of the neck. r r the two parts of its body which ſuſtain the atlas or uppermoſt vertebra, with moveable junctures. s the tranſverſe proceſs, in which is a foramen or ſmall hole to give a paſſage to the vertebral artery and vein. t the lower oblique proceſs. u the ſpinal proceſs, the extremity or end of which is furcated or divided into two.
v w x y z The fifth vertebra of the neck (if we reckon upwards, otherwiſe the third, if we count downwards, as is moſt uſual). v its body. w its tranſverſe proceſs. x its upper oblique proceſs. y its lower oblique proceſs. z its ſpinal proceſs.
a a, &c. The ligaments interpoſed betwixt the bodies of the vertebrae and tying them to each other.
b c d e The lower vertebrae of the neck. *b* the fourth. *c* the third. *d* the ſecond. *e* the firſt. The parts or proceſſes of theſe vertebrae are intelligible from the laſt explained.
f g h The twelfth or uppermoſt vertebra of the back. *f* the body. *g* the tranſverſe proceſs. *h* the ſpinal proceſs.
i k l The eleventh vertebra of the back. *i* the tranſverſe proceſs. *l* the ſpinal proceſs.
m The tranſverſe proceſs of the tenth vertebra of the back.
n n, &c. Openings made betwixt the vertebrae for the ſpinal nerves to come out, &c.
o p q r s The ſpinal proceſſes of the vertebrae of the back. *o* that of the tenth. *p* of the ninth. *q* of the eighth. *r* of the ſeventh, and *s* of the ſixth.
t u The fifth vertebra of the back. *t* the ſpinal proceſs. *u* the body.
w x y The fourth vertebra of the back. *w* the body. *y* the ſpinal proceſs.
z C D The third vertebra of the back. *z* the body. *C* the lower oblique proceſs. *D* the ſpinal proceſs.
H H L X The ſecond vertebra of the back. *H H* the body. *L* the upper oblique proceſs. *X* the ſpinal proceſs.
P S W The firſt vertebra of the back. *P* its body. *W* its ſpinal proceſs.
Υ Υ Θ The uppermoſt vertebra of the loins. *Υ Υ* it body. *Θ* its ſpinal proceſs.
A A Æ B C C D The fourth vertebra of the loins. A A the body. Æ the upper oblique proceſs. B the tranſverſe proceſs. C C the lower oblique proceſs. D the ſpinal proceſs.
E F G H I The third vertebra of the loins. E the body. F the tranſverſe proceſs. G the upper oblique proceſs. H the ſpinal proceſs. I the lower oblique proceſs.
K The ſecond vertebra of the loins, the parts and proceſſes of which may be underſtood from the laſt mentioned.
L M The loweſt vertebra of the loins. L its upper oblique proceſs, M its ſpinal proceſs.
N O P The os ſacrum, or great bone of the ſpine. N the unequal or rough part of its ſide below the os ilium. O the third ſpinal proceſs. P the lower oblique proceſs, which is jointed to the upper oblique proceſs of the firſt ſmall bone of the coccyx.
Q R The firſt ſmall bone of the coccyx. Q its upper oblique proceſs. R its body.
S T The lower ſmall bones of the coccyx. S the ſecond. T the third.

In the Thorax, Shoulder-blades, and Clavicles.

V W X The firſt rib of the left ſide. V the firſt head or anterior part of its ſpinal end that is faſtened into the body of the twelfth vertebra of the back. W The ſecond head that is jointed with the tranſverſe proceſs of the ſame vertebra.
Y Z a a b The ſecond rib of the left ſide. Y the firſt head that is faſtened into a ſinus or ſmall cavity, common to the bodies of the eleventh and twelfth vertebrae of the back. Z the ſecond ſmall head that is jointed with the tranſverſe proceſs of the eleventh vertebra of the back. b its cartilaginous end.
c The ſecond rib of the right ſide.
d d e The third rib of the left ſide. e its cartilaginous end.
f f The third rib of the right ſide.
g h The fourth rib of the left ſide. h its cartilaginous end.
i i k The fourth rib of the right ſide. k its cartilaginous end.
l m The fifth rib of the left ſide. m its cartilaginous end.
n n o o The fifth rib of the right ſide. o o its cartilaginous end.
p p q The ſixth rib of the left ſide. q its cartilaginous end.
r r s s The ſixth rib of the right ſide. s s its cartilaginous end.
t t u The ſeventh rib of the left ſide. u its cartilaginous end.
v v w w The ſeventh rib of the right ſide. w w its cartilaginous extremity.
x y The eighth rib of the left ſide. y its cartilaginous end.
z z z 1 1 The eighth rib of the right ſide. 1 1 its cartilaginous end.
2 3 The ninth rib of the left ſide. 3 its cartilaginous end.
4 4 4 5 5 The ninth rib of the right ſide. 5 5 its cartilaginous end.
6 6 7 The tenth rib of the left ſide. 7 its cartilaginous end.
8 8 9 The tenth rib of the right ſide. 9 its cartilaginous end.
10 10 11 The eleventh rib of the left ſide. 11 its cartilaginons end.
12 12 13 The eleventh rib of the right ſide. 13 its cartilaginous end.
14 15 15 16 The twelfth rib of the left ſide. 14 its firſt head that is faſten-

ed to the body of the lowermoſt vertebra of the back. 16 its cartilaginous end.

17 The inner ſide of the right ſcapula or ſhoulder-blade.

18 19 20 21 22 The left ſcapula. 19 its neck. 20 the cartilaginous part that enlarges its neck, and covers the cavity into which the humerus is jointed. 21 the ſpine. 22 its acromion or upper proceſs.

23 The left clavicle, or collar-bone.

24 24 24 The os pectoris, or breaſt bone.

In the Upper Extremities.

A B C D E F. A F G H The humeri, or bones of the arms. A in the left humerus denotes a protuberance where the deltoid muſcle is inſerted. B C C the upper head. B the leſs protuberance of the upper head. C the greater protuberance of the upper head. Betwixt B and C is a ſinus or groove wherein is lodged the tendon of the lower head of the biceps muſcle of the arm. D a ſmooth cartilaginous cruſt that covers the part of the head which is jointed into the cavity of the ſcapula. E the leſs condyle of the lower head. F the head covered with a ſmooth cartilage with which the radius is articulated. G a convexity incruſted with a ſmooth cartilage to which the ulna is articulated. H the greater condyle.

I K L. I K L M The ulnae, or greater bones of the cubit. I the olecranon, or elbow. L a ſmall head, in its circumference incruſted with a ſmooth cartilage where it is articulated to the radius. M the ſtyloid or pointed proceſs.

N O P Q Q. N O P R S The radii, or leſs bones of the fore-arm. O the upper head. P a tubercle, at the back part of which the tendon of the biceps muſcle of the arm is inſerted, which bends the fore-arm towards the body when the palm of the hand is downwards. Q Q R S the lower heads. R a ſinus or groove through which paſs the tendons of the leſs extenſor and long abductor muſcles of the thumb. S a ſinus or groove that is again partitioned into two, through which paſs the tendons of the external radial muſcles.

T V, T The navicular bones of the wriſts. V the head incruſted with a ſmooth cartilage by which it is jointed to the multangular bones.

W W The lunar bones of the carpus.

X Y The os triquetrum, or cuneiform bone of the wriſt. X that part which is incruſted with a ſmooth cartilage, where it is jointed to the ulna by a ligament that paſſes from the bottom of the head of the ulna to the bottom of the radius, where the latter is jointed to the ulna.

Z Z The oſſa rotunda, or pea-like bones of the carpus.

a a The trapezial, or great multangular bones.

b b The trapezoid, or leſs multangular bones of the carpus

c c c The oſſa magna vel capitata, the great or round-headed bones of the wriſts.

d d e f The unciform bones of the wriſts. e the part incruſted with a ſmooth cartilage where it is articulated with the cuneiform bone (X Y). f the unciform proceſs.

g g h The metacarpal bones of the thumbs. h a cartilaginous cruſt that covers the lower head where it is jointed to the firſt phalanx and the ſeſamoid bone. The ſame is alſo true in the right thumb.

i i The ſeſamoid bones placed at the joint of the thumb with its metacarpal bone.

k k l The firſt phalanx, or bone of the thumb. l a cartilaginous cruſt covering the lower head where it is jointed with the laſt bone.

m m The laſt phalanx, or bones of the thumbs.

n n p q r: n o p r The metacarpal bones of the hands; n that of the index or firſt finger, p that of the middle finger, q that of the ring finger, r that of the little finger. o the ſmooth cartilaginous cruſt that covers the lower head of the metacarpal bone of the index, where it is jointed to the bone of the firſt phalanx: And the ſame holds of the reſt of theſe bones in each hand.

s t u v: s t u v w The bones of the firſt phalanx, or order of the fingers. s that of the little finger, t that of the ring finger, u that of the middle finger, v that of the index. w a ſmooth cartilaginous cruſt that covers the lower head where it is jointed to the bone of the ſecond phalanx, or order. And the ſame alſo holds in the reſt.

x y z *C*: x y z *C D* The bones of the ſecond phalanx, or order of the fingers: x that of the index, y that of the middle finger, z that of the ring finger, *C* that of the little finger. *D* the lower head incruſted with a ſmooth cartilage, where it is jointed to the bone of the third, or laſt order: And ſo of the reſt.

H L X P: *H L X* The bones of the third, or laſt phalanx of the fingers. *H* that of the index, *L* that of the middle finger, *X* that of the ring finger, *P* that of the little finger.

In the Pelvis and lower Extremities.

S W W Y O a b The left os innominatum. *S W Y* the os ilium, hip, or flank bone. *W* its ſpine. *Y* the protuberance from whence ariſes the rectus muſcle of the leg. *O* a the os iſchium or hich bone, a the acute proceſs of the iſchium, b the os pubis.

c d e f f The right os innominatum. c the ſpine or edge of the os ilium. d the tubercle from whence ariſes the rectus muſcle of the leg. e the acute proceſs of the iſchium. f f the os pubis

g h i k l m The left femur, or thigh bone. g the head incruſted with a ſmooth cartilage where it is jointed in the acetabulum. h the neck. i the greater trochanter. l the outer condyle of the lower head. m ſo far extends the ſmooth cartilaginous cruſt that covers part of the condyles at their juncture with the knee.

n n o p p The right femur, or thigh bone. o the inner condyle. p p the boundaries of the ſmooth cartilaginous cruſt that covers the part of this condyle where it is jointed to the tibia and patella.

q r. q r The patellae, or knee-pan bones. r that part which is covered with a ſmooth cartilaginous cruſt which forms part of the joint at the knee.

s s The inner ſemilunar cartilages that are interpoſed in the joints of the knees.

t The outer ſemilunar cartilage in the joint of the knee.

u v v w x y z. u v w x y z The tibiae or greater bones of the legs. u the upper head, v that part of the upper head which belonging to the joint of the knee is covered with a ſmooth cartilaginous cruſt. w a protuberance in which terminates the ligament that comes from the patella, and ties the ſame to the tibia. y z the lower head, z the inner ancle.

A B C. A B C The fibulae, or ſmall bones of the legs. B the upper head. C the outer ancle.

D E F G. D E G The aſtragali, or cockal bones. E that part which helps to form a juncture with the bones of the leg, covered with a ſmooth cartilaginous cruſt. F a ſinus or groove through which paſſes the tendon of the long flexor muſcle of the great toe. G the cartilaginous incruſtation that covers this head of the aſtragalus.

H. H I K The calcanei, or heel bones. I the tubercle by which it begins; and into the back and lower part of which is inſerted the tendo Achillis with the tendon of the plantaris muſcle; it is inclined upward and backward when we bend the leg and foot forwards. K the projecting part that ſuſtains the head of the aſtragalus.

L L The cubical bones of the tarſus, or ancle.

M M The navicular bones of the tarſus.

N The middle cuneiform bone of the tarſus.

O O The leſs cuneiform bones of the tarſus.

P P The greater cuneiform bones of the tarſus.

Q R S T V: Q R S T V W The bones of the metatarſus, or inſtep: Q that of the great toe, R that of the firſt of the ſmall toes, S that of the ſecond, T that of the third, V that of the fourth. W the head of the metatarſal bone of the great toe covered with a ſmooth cartilaginous cruſt at its juncture with the bone of the firſt phalanx and ſeſamoid bones. The ſame is alſo true of the other bones of the metatarſus.

X The ſeſamoid bones that are placed at the joint of the great toe with its metarſal bone.

Y Z *a*: Y Z *a b c D* The bones of the firſt phalanx, or order of the great and ſmall toes: Y that of the great toe, Z that of the firſt of the ſmall toes, *a* that of the ſecond, *b* that of the third, *c* that of the little toe. *D* the round head incruſted with a ſmooth cartilage where it is jointed to the next bone. The ſame likewiſe holds in the reſt of theſe bones.

e e f g h The bones of the ſecond phalanx, or order of the ſmall toes: *e* that of the firſt toe, *f* that of the ſecond, *g* of the third, and *h* of the little toe.

i i The laſt bones of the great toes.

k k: *k l m n* The bones of the third and laſt phalanx, or order of the ſmall toes: *k* that of the firſt, *l* of the ſecond, *m* of the third, and *n* of the little toe.

TAB . III

A Bell Sculp.t

Tab. I.

A. Bell. Sculpt.

THE

First Anatomical Table

OF THE

HUMAN MUSCLES

EXPLAINED.

IN this Table are exhibited the outermoſt of the muſcles, juſt as they are ſituated, behind the common integuments and tendinous faſciæ, throughout the whole anterior part of the body; to which we have added ſome of the ligaments belonging to thoſe faciæ, and to the Skeleton, or proper to ſome other parts, as thoſe of the noſe, ears, and pudends, which are not covered with muſcles.

In the Head, Neck, and Trunk.

a a a b b c d e f g h d. e f g h i k l The Epicranius or muſcle of the ſcalp. a a a the tendinous expanſion betwixt the occipital and frontal muſcles. b b, &c. The frontal muſcles. b b the round margins from whence they ariſe. c the conjunction of the frontal muſcles along the middle of the forehead. d-e. d-e the termination of the frontal muſcles at the orbicular muſcles of the eye-lids. e-f. e-f their inflexion along the eye-lids to the greater or inner corners of the eyes, according to the courſe of the orbiculares palpebrarum. g. g the points that inflect themſelves into the greater angles. h. h portions that go to the elevators of the upper lip and wings of the noſe. i the part that runs betwixt the eye-brows, and upon the noſe. k l the conjunction of the frontal muſcles with the compreſſores narium; with which, at k, they are interwove, and at l they are continued with them.

m m n o o p q r. m o o p The orbicular muſcles of the eye-lids. m m that part which is expanded round the margin of the orbit of the eye. n the part that comes from the corrugator of the eye-brow. o o the part that is ſpread over the eye-lid. p an intertexture or implication of the fibres, which, coming from the eye-lids, meet together near the leſſer canthus or angle. q r the origin of the fibres from the ligament, by which the conjunction of the eye-lids in the greater canthus is tied to the noſe.

s The ligament by which the tarſi, or cartilaginous edges of the eye-lids meeting in the greater canthus, are tied to the noſe, and partly to that origin of it that ſprings from the upper jaw-bone.

t u The compreſſor of the noſtril. t the fleſhy part. u its tendinous expanſion, by which the right and left of thoſe muſcles are conjoined, along the back of the noſe.

w x y. y The elevators of the upper lip and of the noſtril. x that part which goes along the ſide of the noſe to the wing of the noſtril. y that end which is expanded thro' the upper lip and there diſappears.

z A. z The elevators of the upper lip. A the extremity, which being extenuated, runs thro' the upper lip, and therein diſappears.

B. B Portions which come to the upper lip, from the orbicular muſcles of the eye lids.

C. C The leſs zygomatics, which, being extenuated thro' the upper lip, diſappear.

D D. D The elevators of the corners of the mouth. D D continues itſelf partly to the depreſſor of the angle of the mouth, and partly bends itſelf round the ſaid angle to the lower lip, and there it forms the outer part of the orbicular muſcle of the mouth.

E F G. E The greater zygomatics. F the origin from the os jugale. G the lower extremity continued to the depreſſor of the angle of the mouth.

H. H The naſal muſcles of the upper lip. Here may be ſeen its origin from the noſe, and the manner in which it is inſerted into the orbicular muſcle of the mouth.

I Part of the orbicular muſcle of the mouth in the upper lip, where it goes round the angle of the mouth, it receives a portion from the elevator of the angle (D D) which paſſes round with it.

K K Part of the orbicular muſcle of the mouth which is in the red margin of the lips.

L L Thin faſciculi or expanſions, that come partly from the greater zygomatics, extended hither; and partly from the depreſſors of the corners of the mouth; they croſs the faſciculi of the ſubjacent depreſſors of the lower lip.

M. M N The depreſſors of the lower lip, which decuſſate or traverſe each other at N.

O P The elevators of the chin. P fibres that intermix with the fat of the chin.

Q R R S. Q The depreſſors of the corners of the mouth. R R its origin from the lower jaw. S its continuation to the greater zygomatic.

T The buccinator, or trumpet-muſcle.

V W X Y. V The maſſeters. V the anterior and outer part. W the origin of part of it from the os jugale. X the poſterior part which is naked before. Y the origin of this poſterior part from the os jugale, and from the jugal proceſs of the temporal bone.

Z The anterior muſcle of the outer ear.

C D The elevator of the outer ear. *C* its tendinous beginning by which it goes off from the epicranius. *D* the fleſhy part.

H The greater muſcle of the helix.

I. The muſcle of the tragus.

X The leſs muſcle of the helix.

P The antitragicus muſcle

S The digaſtric muſcle of the lower jaw.

W The ſternomaſtoid and cleinomaſtoid muſcles conjoined together into one.

Y Y Part of the cucullares muſcles.

O a a a b b b c c d e e f g h. O a a a f g h The quadratus genæ, or broad muſcle of the neck. *a a a* its origin, conſiſting of thin and ſcattered faſciculi. *b b b* faſciculi or fibres, that in ſome people are detached to the ſide of the neck. *c c* ſcattered fibres, which, diſappearing in the cheek, terminate this muſcle. *d* a faſciculus that is extended towards the angle of the mouth, over the fore-part of the depreſſor of that angle. *e e* the lower jaw projecting under this thin and broad muſcle of the neck (*f g h*), in like manner, the ſternomaſtoideus *f*, and cleinomaſtoideus *g*, with the clavicle *h*, appear protuberant under this muſcle.

i i The ſternohyoidei muſcles.

k k The aſpera arteria, or wind-pipe.

l m. m The ſternomaſtoidei. *m* The tendinous beginning ariſing from the ſternum.

n n The ſternothyroid muſcles.

o p p q r s s. o p p q r s s The pectoral muſcles. *p p* its origin from the ſternum. *q* from the cartilage of the ſixth rib. *r* from the ſeventh, by a beginning that is for ſome way thin and tendinous. *s* a coheſion with the aponeuroſis of the oblique external muſcle of the abdomen. s a part of this muſcle coming from the aponeuroſis of the external oblique muſcle; which part is in this ſubject thin and tendinous, in others it is thicker and fleſhy, varying its condition in various bodies.

s s The teres major.

t u w. t u w The latiſſimi dorſi. *u w* two heads ariſing, the former form the tenth, and the latter form the ninth rib.

x y z a b c c c c. y z a b c c c c The ſerrati magni, vel antici inferiores. *x* the head ariſing from the fifth rib, *y* that from the ſixth rib, *z* from the ſeventh, *a* from the eighth, *b* from the ninth. *c c c c* the origin of the heads themſelves from the ribs.

d e f g h i k k k k l l l m m n o o o p p p p q r r r r s s t u v v w w x. d e f g h k k k k l l l m m n o o o p p p p q r r r r s s t u v v w w x, The external oblique muſcles of the abdomen. d the fleſhy part. e the head ariſing from the ſixth rib, f from the ſeventh, g from the eighth, h from the ninth, i from the tenth. k the origin of the heads themſelves from the ribs. l l l m m n o o o p p p p q r r r r s s t u v v w w x its aponeuroſis or tendinous expanſion, under which, at m m, is protuberant the fleſh of the internal oblique muſcle, and under the aponeuroſes of both theſe, at n, protuberates the fleſh of the tranſverſe muſcle. Here the recti o o o, and their innervations p p p p, appear through the ſaid aponeuroſes, and under the ſame at q, protuberates the pyramidal muſcle. r r r r the linea alba, into which the aponeuroſes of the oblique external muſcles are continued, and croſs each other, and are conjoined to the ſubjacent ones. s an aponeuroſis inſerted into the breaſt bone. The part s may be ſaid to belong either to the aponeuroſis of the oblique external, or to the pectoral muſcle; and ſo either to ariſe from the cartilage of the ſeventh rib, or to be inſerted into it. t an opening in the linea alba, through which, in the fœtus, paſs out the umbilical arteries, the umbilical vein, and urachus. u the bottom of the tendinous margin that is extended from the ſpine of the ilium to the pubes. v v. w w the two parts into which the aponeuroſes ſplits itſelf, and continues diſtinct from thence to the pubes, under the appearance of a tendon, wherein is an aperture, through which paſſes out the chord of the ſpermatic veſſels with the cremaſter muſcle. x a thin expanſion continued from one tendon to the other, and connecting them together. Under this expanſion the ſpermatic chord paſſes along, a little protuberant and conſpicuous through it; till at length the ſaid chord comes out from beneath the expanſion, through an oblique ring or aperture, near the pubes; which ring is ſmall, and formed betwixt the expanſion x, the tendons v v. w w, and the os pubis. Laſtly, the fibres of the aponeuroſis that are expanded under the appearance of fleſh or muſcle, decuſſate other ſmall and thin tendinous fibres; as ſufficiently appears from the figure; and from both thoſe kinds of fibres is formed the expanſion x, that runs from one tendon through the other.

y. y The naked chords of the ſpermatic veſſels.

z. z The cremaſter muſcles.

In the lower Extremities.

A. A The glutei maximi.

B. B The graciles.

C. C The great abductors of the triceps of each thigh.

D. D The long abductors of the triceps of each thigh.

E. E The pectinei muſcles.

F. F The great pſoas or lumbal muſcle of the thigh, coming out of the abdomen.

G. G The internal iliac muſcles.

H I. H I The Sartorius or Taylor's muſcle. I its origin, which is outwardly tendinous from the ſpine of the ilium.

K L. K The glutei medii. L its origin from the ſpine of the ilium.

M N O. M N O The faciales or extenſors of the aponeurotic faſciæ of the thighs. N its origin from the ſpine of the ilium. O its extremity, when the tendinous part is cut off that joins the faſcia or vagina of the thigh.

P Q R S. P Q R S The vaſti externi. Q the tendinous part. R the lower tendon, inſerted into the patella at S.

T V W X. T V W X The recti or ſtraight muſcles of the thighs. V the tendon inſerted into the patella or knee-pan bone. W the place where the tendon inſerts itſelf into the patella. X an aponeuroſis that runs over the patella from the rectus, and afterward joins itſelf to the fore-part of the ligament that ties the patella to the tibia.

Y Z *C*. Y Z *C* The vaſti interni. Z the tendon of its end, inſerted into the patella at *C*.

D H L. D H L The ligament that ties the patella to the tibia. *H* the part where it ariſes from the patella. *L* the whole ſpace by which it is inſerted into the tibia below.

X P S. X P S Part of the biceps muſcle of each leg. *P S* its tendinous end, of which the principal part *P* is inſerted into the head of the fibula; *S* the part which belongs to the tibia.

W Y O. W Y O. The ſartorius (H). *Y* the tendon which is inſerted into the tibia at *O*.

a. a Lower end of the ſemitendinoſus, or ſeminervoſus.

b c d. b c The gemelli or gaſtrocnemii. *b* aponeuroſis. *d* the tendon.

e f f g. e f f g The ſolei. *f f* the origin from the tibia. *g* the tendinous ſurface.

h i i k. h i i k The long flexors of the toes. *i i* the origin from the tibia. *k* the beginning of the tendon.

l. l The tendons of the tibiales poſtici.

m. m The tendons of the plantares muſculi.

n n. n The great tendons of the heel, called Achillis.

o. o The ſolei muſcles.

p q r. p q r The peroneus longus. *q* its origin from the head of the fibula. *r* the tendon ariſing from the outer part of its fleſhy body.

s. s The peroneus brevis.

t u. t u The long extenſors of the toes conjoined into one with the peronei tertii. *u* the origin from the tibia.

w x x. w x x The peronei tertii. *x x* the tendon on the leg and foot.

y z a b c. y z a b c The long extenſors of the toes. *y* the tendon which is divided into four other tendons, *z a b c*, running over the back of the foot, and on the ſmall toes.

e f g h Theſe letters are engraved only upon the firſt of the ſmall toes of the right foot, (there not being room enough for them on the other ſmall toes of each foot); but, from this one, the correſponding parts of the reſt may eaſily be underſtood. d the common tendon of the long and ſhort extenſor of the toes, inſerted into the bone of the ſecond phalanx. e the tendon running to the bone of the third or laſt order, which tendon comes from the ſhort extenſor of the toes; but there is no ſuch tendon goes to the little toe. f part of the common tendon of the long and ſhort extenſor, running to the third or laſt bone. g the common end of the two tendinous portions belonging to the third bone, into which they are inſerted. h the aponeuroſis that joins the tendon d, coming partly from the capſula of the joint of the toe with its metatarſal bone, partly from the tendon of the interoſſeus and lumbrical muſcle of this ſide, and, in part, from the ſide of the bone of the firſt phalanx.

i i i k. i i i k The tendons of the extenſors proper to the great toes. k the end inſerted into the laſt bone of the great toe.

l l l. l l l Branches of the tendons of the extenſors proper to the great toes, which are ſometimes found.

m. m Aponeuroſes which the tendons proper to the great toes receive from the capſules of the joints of the ſaid toes, with their metatarſal bones.

n o o p p p. n o o p p p The tibiales antici. o o the origin from the tibia. p p p the tendon.

q r s t. q r s t The ligaments that cover and confine the tendons at the bottom of the leg, and on the back of the foot. r the upper horn affixed to the tibia at s. t the lower horn.

u w. u w The liguments that retain the tendons near the inner ancles. w its origin from the ſaid ancle.

x x The ligaments that retain the tendons of the tibiales poſtici.

y y. y The tendons of the tibiales poſtici inſerted partly into the navicular bones, and running partly to the greater cuneiform bones.

z. z The muſcular heads which ariſe from the calcanei or heel-bones, and go to the long flexors of the toes in the ſoles of the feet.

A B C. A B C The abductors of the great toes. B the origin from the ſide of the heel-bone. C the tendon.

D D The ſhort flexor muſcles of the great toes.

E E The ſhort flexor muſcles of the other toes.

F F. F The tendons of the long flexors of the great toes.

G The tendon of the long flexor of the great toe in the left foot, where it paſſes under the firſt phalanx, confined in a tendinous ſheath that ſplits into two horns.

H I K. H I The ſhort extenſors of the toes. H a part belonging to the great toes. I a portion running to that ſide of the firſt of the leſs toes, which is next the great toe; ſometimes found. K a portion belonging to the firſt of the leſs toes.

L L The firſt of the interoſſei muſcles, belonging to the firſt of the ſmall toes.

In the upper Extremities.

M N O P Q. M N O Q The deltoid muſcles. M the firſt portion of the anterior order of faſciculi that compoſe this muſcle. N the firſt of the lateral order. O P the third portion of the firſt or anterior order. P its origin from the acromion or upper proceſs of the ſcapula. Q the middle portion of the ſecond order.

R S The coracobrachiales; at the part R they are conjoined with the lower head of the biceps muſcle of the arm.

T. T The long portions of the triceps muſcles of the arms.

V. V The ſhort portions of the triceps muſcles of the arms.

W X Y Z *C*. W X Y Z *C* The biceps muſcles of the arms. W the longer head. X the ſhorter head. Y the common belly. Z the aponeuroſis that gives the tendinous faſcia to the fore-arm, here cut off. *C* the tendon by which it is inſerted into the radius.

D H. *D H* Portions of the triceps muſcles of the arms, which are commonly called the brachiæi externi. *H* a tendon, which, ariſing from the ſurface, the ſaid brachiæus goes to the poſterior condyle of the humerus.

L L L. *L L L* The brachiaei interni muſcles.

X The ſhort ſupinator muſcle of the radius

P S. *P S* The long ſupinators. *S* the tendon.

W W The round pronators of the radius.

Y O. *Y O* The radiales interni. *O* the tendon.

a b c d e e e e e e e e e. *a b* The palmares longi. *b* the tendon. *c d e e e e e e e e* its aponeuroſis, or tendinous expanſion, firſt ſlightly diſtinguiſhed into four portions, which become afterwards more diſtinct and ſtrengthened by tranſverſe tendinous fibres. *d* the portion which it ſends off to the ſhort abductor of the thumb. *e e e e e e e e* the extremities which this aponeuroſis ſends to the roots of the fingers.

f g h i k l l l m. *f f f* The ſublimes. *g h* a portion that belongs to the middle finger; *h* the tendon. *i k* the portion that belongs to the ring finger; *k* the tendon. *l l l* the portion to the index. *m* the portion to the little finger.

n o p The ulnaris internus. *o* the tendon, inſerted into the piſiform bone of the wriſt *p*.

q r. *q* The long flexors of the thumbs. *r* the tendon.

s The tendon of the profundus that goes to the index.

t The pronator quadratus.

u u The ligaments under which paſs the tendons of the long abductors and leſs extenſors of the thumbs.

w x y z b b. *x z z* a b b The long abductors of the thumbs. *x* the upper part. *y* the lower part. *z z* the tendon of the upper part. a the portion which it ſends off to the ſhort abductor of the thumb. b b the tendon of its lower part.

c d. c d The leſs extenſors of the thumbs. d the tendon.

e The outer part of the armillary, or round ligament.

f g g g g h The longer external radialis muſcle. g g g g h the tendon inſerted into the metacarpal bone of the index at h.

i The tendon of the leſs radialis externus longior.

k k l l l l The ſhorter radialis externus. l l l l the tendon..

m n o p q The common extenſor of the fingers. n o the portion that belongs to the index, of which o denotes the tendon. p the tendon to the middle finger. q the tendon to the ring finger.

In the Left Hand.

r s The extenſor proper to the little finger. s the tendon.

t The aponeuroſis by which the tendon of the index o, and that of the middle finger p are conjoined together. By like aponeuroſes alſo are conjoined the tendons of the middle and ring finger, of the ring and little finger: But theſe, as well as the conjunctions and diviſions of the tendons of the common and proper extenſor of the little finger, are not marked with letters; becauſe the whole may be better underſtood from the firſt of the back views, which makes the fifth muſcular table.

u u The tendon of the indicator muſcle.

w The firſt or outermoſt interoſſeus muſcle of the index.

x The abductor of the index.

y The tendon of the greater extenſor of the thumb.

z The oppoſing muſcle of the thumb.

A B The common tendon of the greater and leſs extenſor of the thumb, inſerted into the laſt bone or phalanx at B.

C The aponeuroſis that inveſts the capſule of the joint of the thumb with its metacarpal bone, adhering to the ſaid capſule and to the tendon of the common extenſor of the thumb.

D The poſterior tail of the ſhort flexor of the thumb.

E The aponeuroſis which the poſterior tail of the ſhort flexor of the thumb ſends to the tendon of the common extenſor of the thumb.

F G The abductor of the thumb. G the tendinous end inſerted into the firſt bone of the thumb.

H The aponeuroſis which, ariſing partly from the firſt lumbrical and abductor muſcle of the index, joins itſelf to the tendon of the common extenſor of the index.

I The tendon of the firſt lumbrical muſcle.

K L The common tendon of the indicator and extenſor muſcles belonging to the index.

M The tendon of the firſt lumbrical muſcle, enlarged by a portion it receives from the common tendon of the extenſors of the index, and running to the third or laſt bone of that finger.

N The tendon of the poſterior interoſſeous muſcle of the index, which being increaſed by a portion received from the common tendon of the extenſors of the index, goes on to the third bone or phalanx of the index.

O The common end of the tendons M and N, inſerted into the third bone of the index, formed by the tendons of the interoſſei muſcles (M N) conjoined into one.

P P The tendons of the common extenſor of the fingers, where they deſcend over the backs of the fingers, with the aponeuroſis they receive.

Q The common tendon of the extenſors of the little finger, deſcending over the back of that finger.

R A tendon common to the outer interoſſeous muſcle of the middle finger and ſecond lumbrical muſcle; which tendon being augmented by a portion it receives from the tendon of the common extenſor, runs down to the laſt or third bone.

S A tendon of the ſublimis muſcle.

T A ligament that inveſts the tendon of the profundus, together with the extremities of the tendon of the ſublimis.

V A tendon of the profundus.

The ſame (S T V) alſo holds in the other three fingers, in which the parts being very ſmall, are not marked with letters.

In the Right Hand.

W W The ligament of the carpus that, with the hollow of the wriſt, forms a canal that holds and confines the tendons which go to the fingers and thumb from the ſublimis, profundus, and long flexor of the thumb.

X The opponent muſcle of the thumb.

Y *Z C D* The ſhort abductor of the thumb. Z its origin from the ligament of the wriſt. *C* part of its tendinous end inſerted into the firſt bone of the thumb. *D* tendinous fibres which paſs over the back of the thumb, and join to the other part of the tendon of the extenſors of the thumb, and continues itſelf to a like aponeuroſis of the ſhort flexor of the thumb.

H The common tendon of the extenſors of the thumb.

L Part of the ſhort flexor of the thumb, which may be reckoned another ſhort abductor of the thumb: Its tendinous end being inſerted into the firſt bone of the thumb.

X X P The tendon of the long flexor of the thumb in a manner ſplit in two. *P* the end that belongs to the laſt bone of the thumb.

S The ligament by which the tendon of the long flexor of the thumb is retained upon the firſt phalanx; which ligament is oblique and ſimple at firſt, but is afterwards divided, or ſplit into two extremities.

W The poſterior tail of the ſhort flexor of the thumb.

Y The abductor of the thumb.

O The firſt lumbrical muſcle.

a The anterior, or outer interoſſeous muſcle of the index.

b The abductor of the index, its tendinous end being inſerted into the firſt bone of the index.

c d e The abductor of the little finger. d its origin from the ligament of the carpus, and from the round or piſiform bone of the wriſt, e.

f The abductor of the metacarpal bone of the little finger.

g g The palmaris brevis, or ſquare muſcle of the palm.

h The ſmall flexor of the little finger.

i The fourth lumbrical muſcle.

k The third lumbrical muſcle.

l The ſecond lumbrical muſcle.

m The former interoſſeous muſcle of the middle finger.

n The former interoſſeous muſcle of the ring finger.

o The former interoſſeous muſcle of the little finger.

p The common tendon of the ſmall flexor, and abductor of the little finger.

q The common tendon of the fourth lumbrical, and former interoſſeous muſcle of the little finger.

r The tendon of the poſterior interoſſeous muſcle of the ring finger.

s The common tendon of the third lumbrical, and former interoſſeous muſcle of the ring finger.

t The tendon of the poſterior interoſſeous muſcle of the middle finger.

u The common tendon of the ſecond lumbrical, and former interoſſeous muſcle of the middle finger.

v The tendon of the poſterior interoſſeous muſcle of the index.

w The tendon of the firſt lumbrical muſcle.

x The tendon of the ſublimis: By the ſide of which, next the thumb, is a tendon of the profundus, on which there is not room for a letter to be marked.

y z A tendon of the profundus, ſplit as it were lengthwiſe, and inſerted into the third bone or phalanx.

2 2 The two horns or tails of a tendon of the ſublimis.

3 The ligament that inveſts the tendons of the ſublimis and profundus as they paſs along the firſt bone or phalanx: Which ligament is fixed on each ſide of the margin of the ſaid firſt bone.

4 4 4 Three ſmall ligaments which retain the tendons of the ſublimis and profundus, near the joint of the finger, with its metacarpal bone; they are thick and continued to each other, and to the next ligament, 3, by thin tendinous fibres.

5 The ligament that inveſts the tendon from the profundus, and the extremities or tails of the ſublimis tendon, about the middle of the length of the ſecond bone, or phalanx; which ligament is affixed on each ſide to the margin of the ſecond bone.

The ſame parts (x. y z. 2 2, 3. 4 4 4. 5.) are likewiſe in the reſt of the fingers; and are ſufficiently apparent, although they are not marked with letters.

The parts of the Skeleton which appear betwixt the muſcles are not marked with explanatory letters; ſince they may eaſily be underſtood from the firſt table of the Skeleton, in which the figure is plainly the ſame, and makes the baſis or back-foundation of this; to the bones of which Skeleton the muſcles are inſcribed to form this and the other muſcular tables.

TAB. I.

A. Bell Sculpt.

TAB. II.

A. Bell Sculpt.

THE

Second Anatomical Table

OF THE

HUMAN MUSCLES

EXPLAINED.

MOST of the primary or outermoſt muſcles contained in the firſt Table, being here taken away; we exhibit in the preſent figure the next order of muſcles, together with ſome of the ligaments and naked parts of the Skeleton, which make the foundation of thoſe muſcles.

The parts taken off from this figure are from the *head*, the epicranius, the elevator and anterior muſcle of the outer ear, with the ear itſelf.——From the *face*, the orbiculars of the eye-lids, the compreſſors of the noſtrils, the elevators of the upper lip and ſides of the noſe, the elevators proper to the upper lip, the portion detached from the orbiculars of the eye-lids to the upper lip, the greater and leſs zygomatics, and the depreſſors of the corners of the mouth.—From the *neck*, the latiſſimus or quadratus, and the cucullares.—From the *trunk*, are taken the pectorales, latiſſimi dorſi muſcles, and oblique external ones of the abdomen, with the penis.—From the *thighs*, the extenſors of their tendinous coverings, with the Taylors and ſtraight muſcles of the thighs and legs.—From the *legs* and *feet* are taken, the gaſtrocnemii, the tibiales antici, the ligaments that confine the tendons at the bottom of the leg and upon the back of the foot, the ligaments that retain the tendons near the inner ancles, the ligaments that retain the tendons of the tibiales poſtici, the abductors of the great toes, the aponeuroſes which the tendons of the extenſors proper to the great toes receive from the capſules of the joints of thoſe toes with their metatarſal bones.—From the *arms* are taken the deltoide muſcles. From the *fore-arms* and *hands*, the long ſupinators, the round pronators, the internal radials, the palmares longi, the ligaments under which paſs the tendons of the long abductors and leſs extenſors of the thumbs. Alſo from the right hand are taken the ſhort abductor of the thumb, the ligaments which retain the tendon of the long flexor of the thumb, the palmaris brevis, the ligaments confining the tendons of the ſublimis and profundus where they paſs along the fingers. Alſo from the left fore-arm and hand are taken, the common extenſor of the fingers, the extenſor proper to the little finger, the outer part of the round or carpal ligament, and the ligaments which confine the tendons of the ſublimis and profundus in the fingers.

In the Head, Neck, Thorax, and Shoulders.

a b. a b The corrugators of the eye-brows. b their origin from the os frontis.

c d e. c d e The elevators of the upper eye-lids. c the fleſhy part. d e the part that is like a thin tendinous expanſion, ſpread over the tarſus, which makes it project out in the part e.

f f f. f &c. The membranous part of the eye-lids.

g The ligament that ties the meeting of the eye-lids, in the greater canthus, to the naſal proceſs of the upper jaw-bone. The ſame is alſo in the other ſide of the face.

h h. h h Some continuations of the orbicular muſcles of the eye-lids, ariſing from the extremity of the aforeſaid ligament, and ſpread round the margin of the eye-lids in one continued courſe.

i k l m n The temporal muſcles. k l m the firſt beginning of its origin, from the os frontis at k, from the parietal bone at l, and from the temporal bone m. n its tendon.

o p q r s t u w w x. r The maſſeters. o the back part, where it is not covered, ariſing from the zygomatic proceſs of the temporal bone p, and from the os jugale q. r the anterior and outer part. s its tendinous beginning. t u its origin from the upper jaw-bone t, from the os jugale u. w w its tendinous ending, the extremity of which x is inſerted into the lower jaw.

y The digaſtric muſcle of the lower jaw.

z The buccinator muſcle.

A The external pterygoide muſcle.

B C D E. B. The elevators of the corners of the mouth. C its origin from the upper jaw. D the part where it joins to the naſal portion of the upper lip, and by which it joins the ſphincter of the mouth. E the part by which it is continued to the depreſſor of the corner of the mouth, which is cut off near this part.

F The depreſſor of the wing of the noſtril into which it is inſerted; part of the right is alſo viſible.

G. G The naſals of the upper lip; in which may be ſeen the manner of their ariſing from the noſe, and joining to the ſphincter of the mouth.

H I I The ſphincter of the mouth. H that part which is in the upper lip. I I the part in the red margin of the lips.

K L. K M The depreſſors of the lower lip. L the origin from the jaw. M the part where the right and left croſs each other.

N O The elevators of the chin. O fibres which mix with the fat of the chin.

P The digaſtric muſcle of the lower jaw.

Q The mylohyoidei, inſerted into the os hyoides.

R The ſtylohyoideus muſcle.

S The baſiogloſſus muſcle.

T The ceratogloſſus muſcle.

V A ligament extended from the end of the horn of the os hyoides to the upper proceſs of the thyroide cartilage, which it ties to the ſaid horn.

W The ſtylopharingeus muſcle.

X The lower conſtrictor of the pharynx.

Betwixt W and X is the upper proceſs of the thyroide cartilage.

Y Z. Y The hyothyroidei. Z the origin from the os hyoides.

a a b. a a b The coracohyoidei. *b* the end inſerted into the baſis of the os hyoides.

c c c d. c c c d The ſternohyoidei. *d* the end inſerted into the baſis of the os hyoides.

e e e e. e e e e The ſternothyroidei muſcles.

f The wind-pipe or trachia.

g h i k l m. g h i k l n The ſternal and clavicular portions of the maſtoide muſcle conjoined. *g h* the ſternal part or ſternomaſtoideus. *h* its origin from the ſternum by a tendon, and afterwards tendinous. *i k* the clavicular portion or cleidomaſtoideus. *k* its origin from the clavicle. *l* the conjunction of them both together into one. *m* the inner ſide of them. *n* the end which is inſerted tendinous into the maſtoide proceſs.

o The greater internal ſtraight muſcle of the head.

p p. p The middle ſcaleni.

q q The elevators of the ſhoulder blades.

r r The interior ſcaleni where they ariſe from the firſt ribs.

ſ s v v. ſ s v v The ſubclavian muſcles. *s* their tendinous origin from the cartilaginous end of the firſt rib, the aponeuroſis running along the lower ſide of the muſcle. *v v* the end which is inſerted into the clavicle.

u w x y z C D H. u w x y z C D H. The anterior and upper ſerrati muſcles. *w* the tendinous end that is inſerted into the coracoide proceſs of the ſcapula; the aponeuroſis of which tendon begins to appear firſt in the margin of the muſcle towards the axilla. *x y z C D H* the three heads. *x* the fleſhy part of the firſt head. *y* the thin tendinous part ariſing from the upper ſide of the bony and cartilaginous end of the third rib. *z* the fleſhy part of the ſecond head ariſing in an oblique courſe from the whole breadth of the fourth rib, while its thin tendinous part *C*, ariſes from the bony and cartilaginous end of the ſame rib. *D H* the third head; *H* the thin tendinous part ariſing from the upper ſide of the bony end of the fifth rib.

L L X P. L L X The ſubſcapular muſcles. *X* the tendinous part of its end, inſerted into the leſs protuberance of the upper head of the humerus; *P* the fleſhy part, inſerted into the humerus itſelf below the ſaid protuberance.

S. S The teres major on each ſide.

W The tendinous end of the latiſſimus dorſi joined with the teres major and inſerted into the os humeri.

In the Trunk.

Y O A B C D E F G. *Y* A B C D E F G The greater anterior and lower ſerratus muſcle. *Y* the part that ariſes from the ſecond rib. *O* the head ariſing from the third rib. A the head from the fourth. B from the fifth. C from the ſixth. D from the ſeventh. E from the eighth. F. from the ninth. G from the tenth rib.

H H, &c. The origin of its heads from the ribs.

I I, &c. The conjunction of its heads with the outer intercoſtals.

K K, &c. The outer intercoſtal muſcles.

L L, &c. The internal intercoſtal muſcles.

M N O O P Q R R S T U V V. M N O O P Q R R S T U W W W W X X X Y The internal oblique muſcles of the abdomen. M N O O P Q R R the fleſhy part. N its origin from the ſpine of the ilium. O O the edge of it coming from the tendinous margin of the exernal oblique muſcle of the abdomen. P the part under which runs the chord of the ſpermatic veſſels, a little protuberating and conſpicuous through it. Q the part under which the pyramidal muſcle appears protuberant. R R the fleſhy part inſerted into the tenth rib. S T the aponeuroſis which is ſimple in this part. T the aponeuroſis inſerted into the cartilage of the ninth

fb. U the fleſhy part of the tranſverſe muſcle protuberant under this aponeuroſis. V V the anterior of the two plates cut off, into which this aponeuroſis S, ſplits itſelf, near the rectus. W W W W X X X Y the anterior of the two plates into which the left aponeuroſis S divides near the rectus: This lamella is cut off according to the length of the abdomen, juſt by where it firſt joins to the aponeuroſis of the external oblique muſcle. W W W W X X X the rectus here appears protuberant under the aponeuroſis, divided into fleſhy portions W W W W, by tendinous lines X X X. The pyramidal muſcle appears alſo protuberant under a part of this aponeuroſis at Y.

Z Z Z Z Z a b c d e f g. Z Z Z Z a b c d e f g The ſtraight muſcles of the abdomen. a b c their ends, inſerted into the fifth rib at a, the ſixth at b, and the ſeventh at c d e f, g the tendinous lines. h i the white line. i an opening in that line, through which paſs out, in the foetus, the umbilical arteries and vein with the urachus.

k k. k k The aponeuroſes of the external oblique muſcles here cut off, together with the anterior of thoſe lamellae into which the tendons of the internal oblique muſcles divide themſelves.

l m. l m The pyramidal muſcles. m their beginning from the ligaments by which the oſſa pubis are tied together before, at their ſynchondroſis.

n The ſynchondroſis of the oſſa pubis, tied by its ligaments.

o The penis cut off.

p q. p q The cremaſters. q their beginning, which goes off from the fleſh of the internal oblique muſcle.

In the Lower Extremities.

r r The chords of the ſpermatic veſſels.

s t. s t The middle gluteus. t its origin from the ſpine of the ilium.

u v w. u v w The leaſt of the glutei. v The origin from the ſpine of the ilium. w the tendon inſerted at the root of the greater trochanter.

x x The beginning of the ſtraight muſcles of the thighs cut off.

y y The internal iliacs.

z z The great pſoae, or lumbal muſcles of the thighs.

C C The pectinei muſcles of the thighs.

D H. D H The long abductors of the thighs. *H* its origin from the ligaments that tie the ſynchondroſis of the oſſa pubis.

L X. L X The gracilis. *X* its origin from the ligaments that tie the ſychondroſis of the oſſa pubis.

P P The great abductors of the thighs,

S W Y Y O a S W Y Y O a The internal vaſti. *W* the origin from the femur. *Y Y* the part where it joins to the tendon of the cruralis. *O* the tendon which is inſerted into the patella at *a*. In this muſcle, near the crureus, is an impreſſion from the rectus.

b c. b c The crurei muſcles. *c* the tendon.

d e e f g g h. d e e f g g h The external vaſti. *e e* the origin from the thigh bone. *f* part of the tendinous beginning. *g g* the tendon inſerted into the patella *h*. Near the crureus is a conſiderable impreſſion made in this muſcle by the rectus. See Tab. I.

i k l. i k l The tendons of the ſtraight muſcles of the thighs cut off. *k* the place where it is inſerted into the patella. *l* the aponeuroſis which runs from the tendon of the rectus over the fore part of the patella to the ligament that ties the patella to the tibia; afterwards joining itſelf to the fore part of the ſaid ligament.

m n o. m n o The ligament that belongs to the tibia from the patella. *n* the place where it ariſes from the patella. *o* in this part it is fixed to the tibia beneath.

p q. p q. The tendons of the graciles, inſerted into the tibia at *q*.

r r The tendons of the ſemitendinoſi inſerted into the tibiae.

ſ ſ The popliitei muſcles.

v v t. v v t The biceps in each thigh. *s t* its tendinous extremity, *v* its principal part inſerted into the head of the fibula, *t* the part that belongs to the tibia.

u u The ſolei muſcles.

w x y. w x y The long peronei muſcles. *x* the origin from the head of the fibula. *y* the tendon ariſing from the outer part of the muſcular fleſh.

z z The ſhort peronei muſcles.

A B C D E. A B C D E The long extenſor of the toes of each foot, with the third peronei muſcles. A the muſcular fleſh common to the extenſor and peroneus. B its origin from the tibia. C the third peroneus, D its tendon. E the tendon of the long extenſor of the toes, which divides into four tendons, belonging to the four ſmall toes, of which, that belonging to the little toe ariſes ſooner, and upon the leg itſelf, but the reſt ariſe where they are about to paſs the ligament q in Tab. I. Where the long extenſor and peroneus are joined, there is a conſiderable impreſſion from the tibialis anticus. See Tab. I.

F G G. F G G The tibiales poſtici. F the part that comes from the fibula. G G the part ariſing from the tibia.

H I K L M. H I K L M The proper extenſors of the great toes. I the tendon inſerted into the laſt bone of the ſaid toe. L M a branch of the tendon, which I have ſometimes found inſerted into the firſt bone of that toe.

N O O P. N O O P The ſolei. O O the origin from the tibia. P the tendinous ſurface, where the tendon ariſes.

Q R R S. Q R R S The long flexors of the toes. R R the origin from the tibia. S the beginning of the tendon.

T. T The tendon of the plantaris in each leg.

V V W X. V V W X The tendons of the tibiales poſtici. W the end that is inſerted into the navicular bone, and runs in part to the greater cuneiform bone.

Y Y The great tendons called Achillis.

Z Z The tendons of the long flexors of the toes.

a b. a b Muſcular heads which go to the long flexors of the toes in the ſole of the foot. b the origin from the calcanium.

c d. c d The ſhort flexors of the toes, ariſing from the calcanium at d.

e The outer tail of the ſhort flexor of the great toe.

f f g. f f The tendons of the long flexors of the great toes. At g it is confined in a ligamentary ſheath, that is ſplit into two horns.

h. h The firſt interoſſei belonging to the firſt of the ſmall toes.

i k l. i k The ſhort extenſors of the toes. i the part that belongs to the great toe. k a portion running to that ſide of the firſt toe that is next the great toe, ſometimes found. l the portion belonging to the firſt of the ſmall toes.

m n o p q. m The common tendon of the long and ſhort extenſor of the toes, that is inſerted into the bone of the ſecond order. n a portion of the common tendon of the long and ſhort extenſor running to the third bone. o a tendon from the ſhort extenſors of the toes, to the third bone. p the common end of the two portions belonging to the third bone into which it is inſerted. q an aponeuroſis joining the tendon m, in part from the capſule of the joint of the toe with its metatarſal bone, and in part from the lumbrical muſcle and ſide of the bone of the firſt order. The ſame is to be underſtood of the reſt of the toes in each foot; except, that there is no portion from the ſhort extenſor of the toes, detached to the tendon of the little toe.

In the Arms.

r s. r s the ſupraſpinati. s the tendon inſerted into the great and rough tubercle of the humerus.

t. t The common origin of the coracobrachialis and ſhorter heads of the biceps muſcles of the arms, from the coracoide proceſſes of the ſhoulder blades.

u u The coracobrachiales, in the part v v. v v conjoined with the ſhorter heads of the biceps muſcle of each arm.

w x y z a b c. w x y z a b c The bicipital muſcles of the arms. w x the ſhorter head. w the part that is outwardly tendinous, x the fleſhy part. y z the longer head; y the tendon by which it ariſes, running over the head of the humerus, and then through the ſinus that is betwixt its two protuberances. z the fleſhy part. *a* the common belly. *b* the aponeuroſis, which it gives to the tendinous vagina of the fore-arm, here cut off. *c* the tendon by which it is inſerted into the radius.

d e f g. d e f g The triceps extenſor of each arm. *d* the ſhort head, *e* the long head. *f* the brachialis externus. *g* the tendon which, ariſing from the ſurface of the brachialis externus, belongs to the poſterior chondyle of the humerus.

h h i k, h h i k the internal brachiei muſcles. *i* the lower part that lies near the ſupinator longus. *k* the tendinous ſurface.

l m The longer external radialis muſcle of the right arm. *m* the tendon.

n o p q r The longer external radialis muſcle of the left arm, here dividing itſelf into two, each of which form a tendon. *o* the principal tendon of the chief part. *p* the tendon of the leſs part which joins itſelf to the other tendon. *q* the common tendon, inſerted into the metacarpal bone of the index.

f s. f f s s s The ſhorter radiales externi. *s* the tendon inſerted into the metacarpal bone of the index and middle finger.

t t v u w. t w The ſhort ſpinators. *v u* the end inſerted into the root of the tubercle of the radius, and into the radius itſelf below that tubercle. *w* the poſterior part.

x. x x The profundi muſcles bending the fingers.

y The round pronator of the radius cut off.

z. z The common origins of the ulnares interni and ſublimes; ariſing tendinous from the greater condyles of the humeri.

A. A A B The ulnares interni. B the tendon inſerted into the piſiform bone.

C D E F G H I I K L M N N O O P Q Q. C D E F H I M N The ſublimes. D the thicker part ariſing from the greater condyle of the humerus. E the portion ariſing by a ſmall tendon from the ulna, near the end of the internal brachialis. F G the thinner part ariſing from the radius, G its origin from the radius. H I I a portion belonging to the ring-finger, I I its tendon. K L the portion belonging to the little finger, L its tendon. M N N the portion belonging to the middle finger, N N its tendon. O O P Q Q the portion belonging to the index, P its tendon; Q Q the two horns into which the tendon ſplits, inſerted into the bone of the ſecond phalanx of the index. In like manner are divided into horns, and inſerted the tendons I L N.

R the tendon of the profundus belonging to the index.

S T. S T V W The long flexors of the thumbs. T V the tendon in the part V, as if it were ſplit length-wiſe, and inſerted into the laſt bone of the thumb.

X X The tendons of the long ſupinators cut off.

Y The pronator quadratus.

Z b d. a b c d The long abductors of the thumbs. a the upper part. b the tendon of the upper part, a portion of which c, that it gives to the ſhort abductor of the thumb, is here cut off. d the tendon of the lower part.

e f. e The leſs extenſors of the thumbs. f the tendon.

g. g The greater extenſor of the thumb.

h. h i The common tendons of the greater and leſſer extenſors of the thumbs. i the inſertion of the common tendon into the laſt bone of the thumb.

In the Right Hand.

k The end of the ſhort abductor of the thumb cut off.

l m n o p The ligament of the wriſt, which, with the carpal ſinus, forms a channel confining the tendons in their paſſage from the fore-arm to the fingers and thumb, viz. of the ſublimis, profundus, and long flexor of the thumb, m the origin of the ligament from the piſiform bone of the wriſt, the multangular bone n, and from the navicular bone o. p the canal thro' which paſſes the tendon of the internal radialis muſcle.

q r s t The oppoſing muſcle of the thumb, r its origin from the larger multangular bone, and ligament of the carpus s. t its tendon inſerted into the metacarpal bone of the thumb.

u v w Part of the ſhort flexor of the thumb, which may be reckoned a ſecond ſhort abductor of the thumb. v its origin from the ligament of the carpus. w its tendinous end inſerted into the firſt bone of the thumb.

x The poſterior tail of the ſhort flexor of the thumb.

y The abductor of the thumb.

z The outermoſt interoſſeus muſcle of the index.

a b The abductor of the index. *b* the tendinous end inſerted into the firſt bone of the index.

c d e. The firſt lumbricalis. *d* its origin from the tendon of the profundus belonging to the index. *e* the tendon that joins itſelf with the common tendon of the extenſors of the index, and then goes to the third bone of the index.

TAB. II.

A. Bell Sculpt.

Tab. III.

A. Bell Sculpt.

f g h Lumbrical muſcles, *f* the ſecond, *g* the third, *h* the fourth. They end in tendons like the firſt, which are not marked here on account of their minuteneſs. Theſe tendons join with the tendons of the outer interoſſei.

i i k. i i k. i i k. i i k The tendons of the profundus, ſlit in a manner length wiſe, and inſerted into the bones of the third order, *k k k k.*

l The poſterior or inner interoſſeus muſcle of the index, with its tendon.

m The outer interoſſeus muſcle of the middle finger.

n The common tendon of the ſecond lumbricalis and outer interoſſeus muſcle of the middle finger.

o The poſterior or inner interoſſeus muſcle of the middle finger with its tendon.

p The outer interoſſeus muſcle of the ring finger.

q The common tendon of the third lumbrical and outer interoſſeous muſcle of the ring-finger.

r The tendon of the inner interoſſeus muſcle of the ring-finger.

ſ The tendon of the outer interoſſeus muſcle of the little finger.

t The common tendon of the fourth lumbrical and outer interoſſeous muſcle of the little finger.

t u The ſmall flexor of the little finger. *u* its origin from the ligament of the carpus.

w The tendon common to the ſmall flexor and abductor of the little finger.

x x The abductor of the metacarpal bone of the little finger.

y z The abductor of the little finger. *z* its origin from the piſiform bone and ligament of the wriſt.

In the Left Hand.

C The oppoſing muſcle of the thumb.

D The aponeuroſis encompaſſing the capſule of the joint of the thumb with its metacarpal bone, connected to the ſaid capſule and to the common tendon of the extenſor of the thumb.

H The inner tail of the ſhort flexor of the thumb.

L The aponeuroſis which the inner tail of the ſhort flexor of the thumb gives to the common tendon of the extenſor of the thumb.

X P The abductor of the thumb. *P* the tendinous end inſerted into the firſt bone of the thumb.

S The abductor of the index.

W The outer interoſſeous muſcle of the index.

Y Y The tendon of the indicator.

O The head of the outer interoſſeous muſcle of the middle finger ariſing from the middle metacarpal bone.

1 The head of the inner interoſſeous muſcle of the middle finger ariſing from the metacarpal bone of the ring finger.

2 The head of the inner interoſſeus, from the metacarpal bone of the little finger.

3 The common tendon of the extenſors of the little finger cut off as it paſſes along the back of that finger.

4. 5 The tendons of the common extenſor of the fingers cut off. 4 that of the ring finger. 5 that of the middle finger, paſſing afterwards over the backs of thoſe fingers 6. 6 with the aponeuroſes they receive.

7 The tendon of the common extenſor of the fingers belonging to the index cut off.

8. 9 The common tendon of the indicator and common extenſor of the fingers belonging to the index. 9 its end inſerted into the ſecond bone of the index.

10 The aponeuroſes, which, ariſing partly from the firſt lumbrical, and in part from the abductor of the index, joins itſelf to the common tendon of the extenſor indicis.

11 The tendon of the firſt lumbrical muſcle.

12 The tendon of the firſt lumbrical muſcle, increaſed by a portion received from the tendon of the common extenſor of the index, and running to the third bone of the index.

13 The tendon of the inner interoſſeous muſcle of the index, which being enlarged by a portion received from the common tendon of the extenſor of the index, runs to the third bone of the index.

14 The common tendinous end inſerted into the third bone of the index. This is formed of the tendons 12 and 13 conjoined together.

15 The tendon common to the outer interoſſeous and ſecond lumbrical muſcle of the middle finger; which tendon being increaſed by a portion from the tendon of the common extenſor, runs to the third bone of the middle finger.

Upon the inner ſide of the fingers may be ſeen the tendons of the ſublimis and profundus.

THE

Third Anatomical Table

OF THE

HUMAN MUSCLES

EXPLAINED.

HERE again, moſt of the parts in the preceeding Table being removed, in this third Figure, we exhibit the next Order of Muſcles, together with ſome of the Ligaments and parts of the Skeleton, which now appears more Naked.

In this figure are taken off, from the *head*, the temporal muſcle, the maſſeters, the corrugators of the eye-brows, the elevators of the upper eye-lids, the ligaments by which the junctures of the eye-lids, in the greater angles, are tied to the naſal proceſſes of the upper jaw-bones, the eye-lids themſelves, with the continuations of the orbicular muſcles which ſurround their margins, the naſals of the upper lips, the elevators of the corners of the mouth, the depreſſors of the lower lip. From the *neck;* the ſterno-cleino-maſtoidei, the elevators of the ſcapulae, the coracohyoidei, the ſternohyoidei, the digaſtric of the lower jaw, the ſtylohyoideus. From the *trunk;* the ſubclavians, the anterior ſerrati, both upper and lower, the recti, pyramidales and internal oblique muſcles of the abdomen, the cremaſters and teſticles. From the *thighs;* the middle glutei, pectinei, long abductors, the recti, internal and external vaſti, with the crurei. From the *legs* and *feet;* the ligaments belonging to the knee-pan and ſhin-bones, the tendons of the ſeminervoſi, the proper extenſors of the great toes, the long extenſors of the toes, with the tendinous ends belonging to the firſt three of the ſmaller toes, the peronei tertii, the tendons of the plantares, the ſolei, the tendons of Achilles, the ſhort flexors of the toes, the outer tail of the ſhort flexor of the great toe, the capſule or ſheath confining the tendon of the long flexor of the great toe, near the firſt bone of the toe. From the *arms;* the ſupraſpinati, the bicipital flexors, with the long and ſhort extenſors of the cubit. From the *fore-arms* and *hands*; the ſublime flexors, the ulnaris interni, ends of the long ſupinators, long abductors of the thumbs, and leſs extenſors of the thumbs. From the *right hand;* the end of the ſhort abductor of the thumb, part of the ſhort flexor, which may be reckoned a ſecond abductor, the oppoſer of the thumb, the abductor of the index, the ſmall flexor and abductor of the little finger. Alſo from the cubit and *left-hand* are taken the tendon of the indicator, the greater extenſor of the thumb. The common tendon of the greater and leſs extenſor of the thumb, with its adjoining aponeuroſis that inveſts the capſule of the joint of the thumb with its metacarpal bone, the oppoſer of the thumb, the abductor of the index, with its aponeuroſis that joins to the common tendon of the extenſors of the index.

In the Head and Neck.

a a The balls of the eyes.

b The cartilage of the hole through which paſſes the tendon of the upper oblique muſcle of the eye; which cartilage ſupports and confines the ſaid tendon.

c d The tendon of the ſuperior oblique muſcle of the eye, c part of it going to the notch or pully near the internal ſide of the orbit. d the part that runs back to the globe of the eye after paſſing the pully.

e e The ſtraight muſcles turning the eyes upward, and inſerted into their hard coats.

f The rectus that turns the eye to the noſe, fixed into the ſclerotica.

g The rectus that turns the eye from the noſe, fixed to the ſclerotica.

h h The recti depreſſing the eyes, fixed into the ſclerotica.

i. i k The lower oblique muſcles of the eyes. k their origin from the upper jaw, in the bottom of the orbit, near its edge, betwixt the future proper to the ſaid jaw, and the os unguis.

l. l m The depreſſors of the wing of the noſtrils. m the end inſerted round the root of the wing.

n o p p Part of the ſphincter of the mouth in the upper lip. o the part that is in the red margin of the lip. p p denote where the depreſſors of the corners of the mouth are cut off, from their inſertion into the ſaid ſphincter, where it ſurrounds the upper lip at the angles of the mouth.

q r s t t Part of the ſphincter of the mouth that is in the lower lip. q the part in the red margin of the lip. s here it paſſes under the faſciculus z, and is continued to the buccinator, and to part of the elevator of the corner of the mouth, and of the greater zygomatics joining it. t t portions to the ſphincter of the mouth, which they join from the lower jaw; afterwards they paſs under portions of the buccinators z, and join themſelves to the ſaid buccinators.

u A ſinus or ſpace betwixt the portion of the buccinator z, and the portion t, where the latter joins the ſphincter of the mouth; in which ſpace are fixed ſome glandules.

v. v w x y z *a* The buccinators. w the part that goes into the ſphincter of the mouth in the upper lip. x here part of it joins to the elevator of the corner of the mouth, and to part of the greater zygomatics. y the portion that goes into the ſphincter of the mouth in the lower lip. z the portion that goes to the upper lip, and there joins the internal part of the ſphincter of the mouth. *a* here it continues itſelf to the portion t, that joins the ſphincter of the mouth.

b. b c d The elevators of the chin. *c* the part in which they are joined together. *d* the fibres they intermix with the fat of the chin.

c c The external pterygoideus, having a tendinous end.

f The internal pterygoideus.

g The mylohyoideus, inſerted into the baſe of the hyoidal bone.

h The baſiogloſſus ariſing from the baſis and horn of the hyoidal bone.

i Ceratogloſſus ariſing from the horn of the hyoidal bone.

k l l The os hyoides. *k* its baſe. *l l* its horns.

n n The larynx. *m* the thyroide cartilage: Betwixt *x y* and *z* is its upper proceſs. *n* the cricoide cartilage.

o The wind-pipe.

p. p The cricothyroidei muſcles. *p* the anterior part ariſing from the cricoide cartilage: And a little below this part is its back part.

q q r ſ. q q r ſ s The ſternothyroidei. *r* a ſeparate portion that joins it; *ſ* part of its extremity inſerted into an eminence of the thyroide cartilage, which runs obliquely through its external ſide: *s* a part that joins itſelf to the poſterior edge of the hyothyroidei, and with that belongs to the horn of the hyoidal bone.

v t u w. v t u w The hyothyroidei. *t* the origin from the horn and baſis of the hyodial bone. *u w* the extremity inſerted at the bottom of the margin of the thyroide cartilage *u*, before the eminence which runs obliquely through the outſide of the ſaid cartilage. *w* the eminences themſelves.

x The common extremity into which the ſtylopharyngeus, palatopharyngeus, and ſalpingopharyngeus conjoin themſelves, the part produced from the ſtylopharyngeus.

y The ligament which belongs to the end of the horn of the hyodial bone, from the upper proceſs of the thyroide cartilage.

z The lower conſtrictor of the pharynx.

C C The internal great recti muſcles of the head.

D H The longus colli. *H* the end coming from the back to the tranſverſe proceſs of the ſecond vertebra of the neck; the tendinous part of which end, ſee in the table following.

L L The firſt anterior intertranſverſales of the neck.

X X The elevators of the firſt ribs.

P S W Y O. P S W Y O The firſt or anterior ſcaleni. *S* the origin from the firſt rib. *W Y O* its three extremities, of which *W* belongs to the tranſverſe proceſs of the ſecond vertebra of the neck, reckoning from the back; *Y* to the third, and *O* to the fourth vertebra.

A B C D E. A C D E The middle ſcaleni. B the origin from the firſt rib. C D E the extremities of which C belongs to the tranſverſe proceſs of the firſt vertebra of the neck from the back, D to the fifth, and E to the ſixth and ſeventh.

E The trachelomaſtoideus muſcle.

E The complexus muſcle.

Æ The upper oblique muſcle of the head.

F F. F F Betwixt *q* and *r* appears the pleura.

In the Trunk and Thighs.

G H I K K. L M N O P Q R S: G H I K K. L M N O P Q R S The external intercoſtals. G H I K K the firſt, L the ſecond, M the third, N the fourth, O the fifth, P the ſixth, Q the ſeventh, R the eighth, S the ninth. The firſt ariſes from the cartilaginous end of the firſt rib, H from the bony part of the rib, is inſerted into the bony part of the ſecond rib K K; in the ſame manner the following muſcles ariſe from the bony part of the upper rib, and are inſerted into the bone of the lower rib.

T U V W X Y Z. a b c d e f: T U V W X Y Z. a b c d e f The internal intercoſtals. T U V W X the firſt, Y the ſecond, Z the third, a the fourth, b the fifth, c the ſixth, d the ſeventh, e the eighth, f the ninth. The firſt ariſes from the cartilaginous end of the firſt rib U, and from the ſternum V; it is inſerted into the bony part of the ſecond rib W, and its cartilaginous end X. In the ſame manner appears in the following muſcles how they ariſe from the cartilaginous end and bony part of the upper rib, and are inſerted into the cartilaginous and bony part of the lower rib. g h i k: h denote parts of thoſe intercoſtals which are inſerted betwixt the cartilages of thoſe ribs, after the meeting or conjunction of their cartilages.

l m n o p p q q r. l m n o p p q q r The tranſverſe muſcles of the abdomen; l the fleſhy part, m the aponeuroſis, n the origin from the cartilaginous end of the eleventh rib, o the origin from the ſpine of the ilium, p p the margin that comes from the tendinous edge of the external obliquus of the abdomen; q q here is cut off a part of the aponeuroſis, which paſſes before the rectus and pyramidalis muſcle. r the bottom margin of the upper part of the aponeuroſis, which paſſes behind the rectus, and immediately adheres to the peritonaeum.

s t t t. s t t t The poſterior lamellæ of the aponeuroſes of the internal oblique muſcles ſpread over the aponeuroſes of the tranſverſe muſcles. t t t here it is cut off in the part where it firſt joins with the aponeuroſes of the tranſverſe muſcles.

u v w. v w Here the aponeuroſes of the tranſverſe, with the poſterior covering lamellæ of the aponeuroſes belonging to the internal oblique muſcles, inſert themſelves into the fore part of the enſiform cartilage, not far from its tip u, into the edges of the ſaid cartilage v v, and into its bony part w w.

x The triangular muſcle of the ſternum conjoined with the tranſverſalis of the abdomen, and inſerted with it. The ſame alſo holds on the other ſide.

y y The linea alba. z The opening in it, through which, in the embryo, paſs out the umbilical arteries, with the umbilical vein and urachus.

a a. a a From hence are cut off the aponeuroſes of the external oblique muſcles of the abdomen, with the anterior lamellæ of the aponeuroſes belonging to the internal oblique muſcles.

b b b b b b c d d The peritonæum. *c d d* the footſteps of the ligament *c*, which was formerly the urachus, and of the ligaments *d d*, which were formerly the umbilical arteries.

e f g h. e f g h The chords of the ſpermatic veſſels. *e f* the two veins. *g* the artery, the veins, together with the artery, paſs along beneath the tranſverſe muſcle, through the peritonæum to the upper part of the os pubis; to theſe veſſels the vas deferens *h* joins itſelf coming out of the pelvis, and then paſſes down together with them, through the groin to the ſcrotum.

i The ſynchondroſis, or conjunction of the oſſa pubis, tied together by their ligaments.

k The penis cut off. See Table IV. following.

l The external ſphincter of the anus.

m The accelerator urinæ; and the ſame is on the other ſide.

n The erector penis, which is alſo on the other ſide.

o p q r ſ. o p q ſ The leſs glutei. *p* the origin from the os ilium. *q* the tendon which is inſerted into the root of the great trochanter *r*. *q* the fore-part of the muſcle.

s v. s v The internal iliacs. *v* the origin from the ſpine of the ilium.

t u. t u The great pſoæ, or lumbal muſcles. *u* the tendon to which joins the fleſh of the iliacus internus.

w x. w x The external obturators. *x* the origin from the os pubis.

y z C. y z C The ſhort abductors of the thighs, in which are impreſſed the footſteps of the long abductors and pectinei: ſee Tab. II. *z* the head, which is outwardly tendinous, ariſing from the os pubis near its juncture. *C* its tendinous end from the ſame part.

D D H L X. D D H L X The large adductors of the thighs. *D D* the part which is inſerted into the ridge or ſpine of the thigh bone. *H L X* the other part belonging to the condyle of the thigh bone. *L* its tendinous ſurface, paſſing into the tendon *X*.

P S W. P S W The ſemimembranoſi. *S* the tendinous ſurface paſſing into a tendon. *W* the thinner portion which ſends out the tendon belonging to the internal margin of the tibia, or ſhin bone.

Y O A B. *Y O* A B The graciles, in which are impreſſed the footſteps of the long adductors of the thighs; ſee Tab II. *O* the origin from the ligament, tying together the oſſa pubis at their juncture. A the tendon, inſerted into the tibia B.

C D E F. C D E F The ſhorter heads of the bicipital muſcles of the legs. D E F the tendinous end, of which the principal part E, is inſerted into the head of the fibula; F the part belonging to the tibia.

In the Legs and Feet.

G H I K K L. G H I K K L The long peronei, in which are impreſſed the marks of the long extenſors of the toes (ſee Tab. II.) H the beginning of its upper origin from the head of the fibula, and from the tibia I. K K the beginning of its lower part ariſing from the ſpine of the fibula. L the tendon ariſing from the outer part of its fleſh.

M N N. M N N O The ſhort peronei, in which are impreſſed the marks of the long extenſors of the toes; ſee Tab. II. N N the origin from the fibula. O the tendon.

P Q Q R R S S T U. P Q Q R R S S T U The tibiales poſtici. Q Q the origin from the tibia, and from the ſpine of the fibula. R R S S T U the tendon, which being partly inſerted into the navicular bone T, the portion U runs to the greater cuneiform bone.

V W. W W The long flexors of the great toes. W the tendon.

X Y Y Z a. X Y Y Z a The long flexors of the toes. Y Y the origin from the tibia. Z the beginning of the tendon, a the tendon itſelf.

b c. b c The portions which join the long flexors of the toes in the ſoles of the feet. c the origin from the calcaneum.

d The inner tail of the ſhort flexor of the great toe, that is next the ſmall toes.

e f g h i k l. e f g h i k l The ſhort extenſors of the toes, which divide into five portions. f the tendon of the portion belonging to the great toe, inſerted into the firſt bone at g. h the tendon of a portion ſometimes found running to the ſide of the firſt toe that is next to the great toe. i the tendon of the portion belonging to the firſt of the ſmall toes, k that to the ſecond, and l to the third.

m m. m The firſt interoſſeus muſcles of the firſt ſmall toes. Betwixt i and k in the left foot is the ſecond interoſſeus of the firſt ſmall toe, betwixt k and l, left, is the ſecond interoſſeus of the ſecond ſmall toe.

n o. p left. The tendons of the long extenſors of the toes cut off. n that which belongs to the firſt of the ſmall toes, o that of the ſecond, p that to the third, and ſo likewiſe in the right foot.

q The common tendon of the long and ſhort extenſors of the toes inſerted into the bone of the ſecond phalanx. r part of the ſame, running to the third bone. s the tendon to the third bone from the tendon of the ſhort extenſor of the toes. t the common end of the two portions to the third bone, wherein it is inſerted. u an aponeuroſis joining to the tendon q, and going partly to the capſule of the joint of this toe, with its metatarſal bone, coming partly from the interoſſeus of that ſide, in part from the lumbrical muſcle, and partly from the ſide of the bone of the firſt phalanx. The ſame holds in the ſecond and third of the ſmall toes of this foot, and in the three firſt of the left foot.

TAB. III.

A. Bell Sculp.

In the Shoulders, Arms, and Hands.

v v w x y. v x The ſubſcapulares. w x the tendinous part of its extremity, inſerted into the leſs unequal protuberance of the upper head of the humerus, at x. y the fleſhy part of its end inſerted into the humerus below its head.

z *a*. z The teres major. *a* its tendinous end inſerted into the humerus.

b c d e e. b c d e e Part of the ſhorter heads of the bicipital muſcles of the arms, outwardly tendinous, and cut off at *c c*; having a common origin with the coracobrachiales at *d d*, from the coracoide proceſs of the ſcapulæ; at *e e*. *e e* they are conjoined with the coracobrachiales.

f g. f g The coracobrachiales, divided by a nerve that paſſes thro' in the part *g*.

h i. h i The external brachiales. *i* the tendon, which, ariſing from its ſurface, ends in the poſterior condyle of the humerus.

k l m n o p. k l m n o p The brachiales interni. *l m* the forked beginning by which it ariſes from the humerus. *n* its origin from the edge of the humerus. *o* the lower part upon which lies the long ſupinator. *p* the tendinous ſurface.

q r The longer external radialis muſcle of the right hand. *r* the tendon.

ſ s v t u The longer external radialis muſcle of the left hand, which here divides itſelf into two. *s* the tendon of the principal part, which is alſo itſelf the moſt conſiderable. *v* the tendon of the leſs portion which joins itſelf with the other, and together forms the common tendon, *t* inſerted into the metacarpal bone of the index *u*.

w x. w w x x y The ſhorter external radial muſcles. *x x* the tendon inſerted into the two metacarpal bones *y* of the index and middle finger.

z C D H. z H The ſhort ſupinators. *C D* the end which is inſerted at the root of the tubercle of the radius, and into the radius itſelf, below the ſaid tubercle *D*. *H* the back part.

L The extremity of the round pronator which is here cut off.

X X The pronator quadratus, or ſquare pronator of the radius

P P S S W Y O A B. *P W Y O* The long flexors of the thumbs. *S S* its origin from the radius, *W Y* the portion which joins it ariſing from the greater condyle of the humerus, but ſeldom found; and which forms a tendon *Y*, that joins itſelf to the fleſhy part of the flexor, and makes up the firſt riſe of its tendon *O* A B, of which the part *O* adheres to the fleſhy portion of the flexor, the part A going along by the metacarpal bone of the thumb, is there in a manner ſplit longitudinally, and at length inſerted into the extremity of the laſt bone of the thumb B.

C C D E F G H H I I K K L L M M M M. C C D E F I K L. The profound flexors. D its origin from the ulna, E F G three tendons ariſing from its fleſhy belly, and betwixt which are fleſhy fibres. The firſt of theſe, E, goes into the tendon of the index H H; the ſecond, F, into the middle tendon I I; and the third, G, into the two K L, of which one K K belongs to the ring finger, and the other to the little finger L L. Where theſe tendons run along the fingers and palm, they are in a manner ſlit longitudinally, up to their extremities M M M M, which are inſerted backwards into the bones of the third or laſt phalanx.

In the right Hand.

N O P Q R The ligament of the wriſt, which, together with the carpal ſinus, forms a canal that confines or retains the tendons coming from the fore arm to the fingers and thumb, namely, of the ſublimis, profundus, and long flexor of the thumb. O its origin from the navicular bone of the wriſt, and from the internal protuberance of the larger multangular bone P, from the piſiform bone Q, and from the crooked proceſs of the cuneiform bone R, S the canal through which paſſes the tendon of the internal radialis.

T The ligament from the piſiform bone belonging to the fourth metacarpal bone.

U V W X Y The adductor of the metacarpal bone of the little finger. V its origin from the crooked proceſs of the cuneiform bone, and of the ligament of the wriſt W. It is inſerted into the metacarpal bone of the little finger at X Y.

Z Z a The ſhort flexor of the thumb, a its tendinous end inſerted into the ſeſamoide bone of the thumb which is fartheſt from the index.

b b The adductor of the thumb. c d d e f the firſt lumbrical. d d its origin from the tendon of the profundus belonging to the index; and from the thicker part of thoſe two tendons, in which the profundus is in a manner divided longitudinally. e the aponeuroſis which joins it with the aponeuroſis of the abductor indicis, and with that communicates with the common tendon of the extenſor indicis. f the tendon which joins itſelf with the common extenſor of the index, and then goes to the third bone of the index.

g h i The ſecond lumbrical muſcle. h i its origin, from the tendon of the profundus of the middle finger h, and from the thicker part of thoſe into which that tendon is in a manner ſplit longitudinally: But the thinner part of it ariſes from the tendon of the profundus i, belonging to the index. Its tendon joins that of the former interoſſeus of the middle finger.

k l m The third lumbrical muſcle. l m its origin from the tendon of the profundus belonging to the middle finger l, and from the thinner portion of thoſe into which it is ſplit in a manner longitudinally; alſo from the tendon of the profundus the thicker part of it belonging to the ring finger m. Its tendon joins the tendon of the outer interoſſeus of the ring finger.

n o The fourth lumbrical muſcle. o its origin from the tendon of the profundus belonging to the little finger; and from the thicker of thoſe portions into which the tendon is in a manner ſplit longitudinally. Its tendon joins that of the outer interoſſeus of the little finger.

p The tendon common to the fourth lumbrical muſcle with the outer interoſſeus of the little finger; which tendon joins itſelf with that of the common extenſor, and goes to the third bone of the little finger.

q The tendon of the poſterior or inner interoſſeus muſcle of the ring finger, where it joins with the tendon of the common extenſor, running afterwards to the third bone of the ring finger.

r The outer interoſſeus of the ring finger.

s The tendon common to the third lumbrical muſcle, with the outer interoſſeus of the ring finger, which tendon joins itſelf with that of the common extenſor, and goes to the third bone of the ring finger.

t u The inner interoſſeus of the middle finger. u the tendon by which it joins the tendon of the common extenſor, and goes to the third bone of this finger.

v The outer interoſſeus of the middle finger.

w The tendon common to the ſecond lumbricalis and outer interoſſeus of the middle finger, which joining the tendon of the common extenſor, goes to the third bone of the middle finger.

x y The inner interoſſeus of the index. y the tendon by which it joins the tendon of the common extenſor of the index, and then goes to the third bone of the index.

z The outer interoſſeus of the index, its tendinous end being inſerted into the firſt bone of the index.

In the left Hand.

a b The ſhort flexor of the thumb. b the tendinous expanſion, by which it joins the aponeuroſis that inveſts the capſule of the joint of the thumb with its metacarpal bone, and therewith joins to the tendon of the common extenſor of the thumb.

c d The adductor of the thumb. d the tendinous end inſerted into the firſt bone of the thumb.

e f The outer interoſſeus of the index, ariſing from the metacarpal bone of that finger, and inſerted with its tendinous end f, into the firſt bone of the index.

g The head of the outer interoſſeus of the middle finger, ariſing from the metacarpal bone of that finger.

h The head of the inner interoſſeus of the middle finger, ariſing from the metacarpal bone of the ring-finger.

i The head of the inner interoſſeus of the ring finger, ariſing from the metacarpal bone of that finger.

k The tendon of the indicator muſcle cut off.

l The tendon of the common extenſor to the index cut off.

m The tendon common to the indicator, and common extenſor belonging to the index; n its extremity inſerted into the third bone of the index.

o p q The firſt lumbrical muſcle. p the tendon. q the aponeuroſis which joins it with the aponeuroſis of the abductor indicis, and with that adheres to the tendon of the common extenſors of the index. r the tendon of this muſcle conjoined with the tendon of the common extenſors of the index, and, being increaſed by a portion received from thence, it runs down s, to the third bone of the index.

t The tendon of the inner interoſſeus of the index, which being increaſed by a portion received from the tendon of the extenſors common to the index, runs to the third bone of the index.

u The tendinous end common to the tendons s and t joined together in one, and inſerted into the third bone of the index.

v w The tendons of the common exenſors cut off, belonging to the middle finger v, and to the ring finger w; after which they run down the backs of the fingers with the aponeuroſes which they receive.

x The tendon of the common extenſors, to the little finger cut off, deſcending along the back of that finger.

y The tendon common to the outer interoſſeus of the middle finger, and ſecond lumbrical muſcle; which tendon having received a portion from the common extenſor, that ſupplies the middle finger, is thereby enlarged, and joins itſelf with the tendon z of the inner interoſſeus of the ſame finger; it is alſo increaſed by a portion which it receives from the tendon of the common extenſor belonging to the middle finger; and the common tendinous end, ariſing from this conjunction, then ends in the third bone of this finger.

THE

Fourth Anatomical Table

OF THE

HUMAN MUSCLES

EXPLAINED.

IN this Figure, which repreſents the fourth order of the muſcles, we have not only removed moſt of the outer parts of the Figure laſt preceding, but we have alſo taken away every thing from the bony cavities of the eyes, except the muſcles; from the neck we have removed the whole pharynx and gula, together with the larynx and windpipe; from the opened thorax all the parts that are above the diaphragm, the heart, lungs, pericardium, and two pleuræ: Alſo the whole peritonæum, with the abdominal viſcera which it contains, and whatever elſe lies near the loins on this ſide, except the muſcles.

Here, from the third table, are taken off from the *head*, balls of the eyes, with the extremities of the muſcles inſerted into them, the cartilage of the notch or pully through which the tendon of the obliquus ſuperior paſſes to the eye, the depreſſors of the ſides of the noſe, the ſphincter of the mouth, the buccinators, the elevators of the chin, the external pterygoidei. From the *neck*, the mylohyoidei, the baſiogloſſus, the ceratogloſſus, hyoidal bone, larynx, windpipe, cricothyreoidei, ſternothyreoidei, hyothyreoidei, the common extremity in which the ſtylopharyngeus, palatopharyngeus, and ſalpingopharyngeus join together, and the part produced from the ſtylopharyngeus; the ligament that goes from the upper proceſs of the thyroide cartilage, to the end of the horn of the os hyoides, the lower conſtrictor of the pharynx, the larger internal ſtraight muſcles of the head, the firſt or anterior ſcaleni, the trachelomaſtoideus, complexus, and two pleurae. From the *trunk* are taken the left external intercoſtals, the anterior extremities of the fourth, fifth, ſixth, ſeventh, eighth, ninth, and tenth ribs, together with the lower part of the breaſt-bone, and the intermediate intercoſtal muſcles; the tranſverſe muſcles of the abdomen, with the poſterior plates of the aponeuroſes, belonging to the internal obliqui of the abdomen, the triangulares ſterni, the linea alba, chords of the ſpermatic veſſels, and peritonaeum. From the *pelvis* are taken the leſs glutei. From the *thighs* the ſhort abductors, the ſemimembranoſi, graciles, and bicipital muſcles of the legs. From the *legs* and *feet* are taken the long peronei, the long flexors of the great toes, the long flexors of the ſmall toes, the muſcular portions which join the long flexors of the toes in the ſoles of the feet, the ſhort extenſors of the toes, the tendons of the long extenſors of the toes, together with the other tendons and aponeuroſes ſtretched over the backs of the toes: Alſo from the left foot is taken the inner tail of the ſhort flexor of the great toe. From the ſhoulder blades are taken the teretes majores. From the arms the coracobrachiales, together with the ſhorter heads of the bicipital muſcles of the arms, and the brachiales external and internal. From the *fore-arms* and *hands* are taken the longer and ſhorter external radiales, the long flexors of the thumbs, and the profundi: From the right cubit the cut extremity of the pronator teres. Alſo from the right hand is taken the internal ligament of the wriſt, the ligament from the piſiform to the fourth metacarpal bone, the adductor of the metacarpal bone of the little finger, and the lumbricales. From the left hand are taken all the muſcles, tendons, and aponeuroſes, except the adductor and ſhort flexor of the thumb.

In the Head, Neck, and Trunk.

a b b. b b The elevators of the upper eye-lids. b b the extremity cut off.

c d The upper obliquus of the eye. c its origin from the internal ſide of the margin of the optical hole. d the end cut off, where it enters the pulley.

e f. f The ſtraight elevators of the eyes. e the origin, partly from the upper ſide of the margin of the optical hole, and in part betwixt the ſaid hole, and what follows below it. f the extremity cut off.

g h The ſtraight adductor of the eye. g its origin from the edge of the optical hole towards the noſe. h its extremity cut off.

i l. k l The ſtrait abductor of the eyes. i the origin from the lower part of the margin of the hole that lies below the optical foramen; it beginning where the round hole is near the ſlit into which it opens. l the extremity cut off.

l m. n The ſtrait depreſſors of the eyes. m the origin from the lower part of the bony portion, which divides the optical hole, and from thence downward.

o p q. o q The lower oblique muſcles of the eyes cut off where they inſert themſelves into their globes. p the origin from the edge of the bony orbit. q the inner part.

r The internal pterygoideus.

s The upper oblique muſcle of the head.

t u v w x y z *a*. t u w x y z *a* The long muſcles of the neck. t u v w x the principal part which belongs to the bodies of the vertebrae, a part of which, marked u, is tendinous. v w x the heads from a tendinous origin, ariſing from the tranſverſe proceſſes of the vertebrae of the neck: v that from the fourth, w from the third, x from the ſecond. y z *a* the part which belongs to the tranſverſe proceſſes, the tail of which z *a* belongs to the tranſverſe proceſs of the ſecond vertebra of the neck, being tendinous in the part *a*.

b c d e f g h i k l m n. *b d e f g h i k l* The middle ſcaleni. *c* the origin from the firſt rib. *d e* the tail belonging to the tranſverſe proceſs of the ſecond vertebra of the neck, *e* the tendinous end. *f g* the tail to the ſecond, *g* the tendinous end. *h i* the tail to the third, *i* the tendinous end. *k l* the tail to the fourth, *l* the tendinous end. *m* the tail to the fifth. *n* the part which divides into the two laſt tails.

o p q r: *q r* The intertranſverſales on the foreſide of the neck. *o* the fourth, *p* the third, *q* the ſecond, *r* the firſt.

f. f The elevators of the firſt ribs inſerted into thoſe ribs.

s s v v t t u w x y z A The external intercoſtals. *s s* the firſt, &c. the left are here taken away.

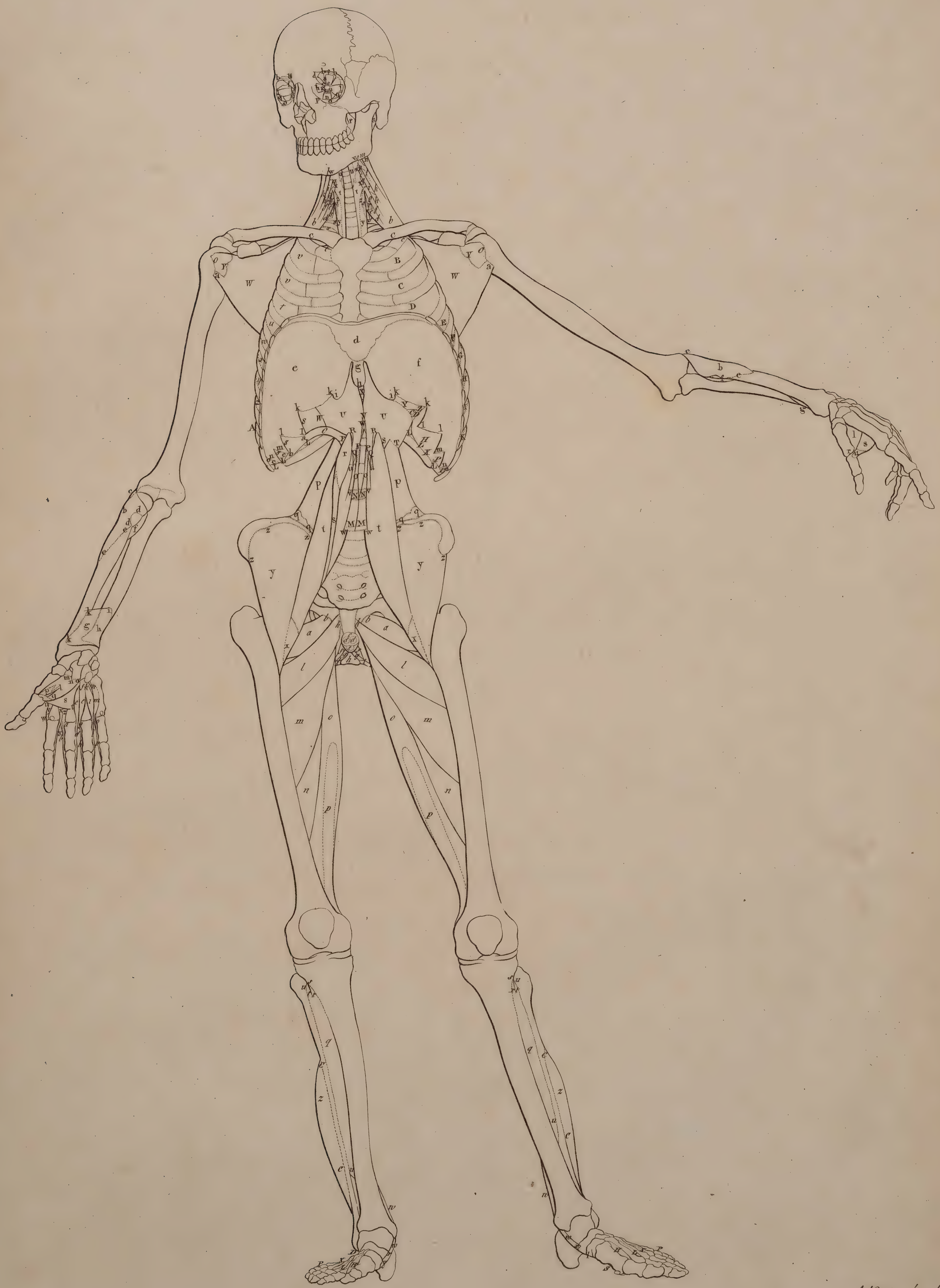
B C C D E F G H I K L L. B C C C D L L L The internal intercoſtals. B B the firſt, &c. L L. L L L the eleventh.

M M N N N O O P P Q Q R R S T U U V W X Y Z *C D H L X P P S S S W Y O* a b c c d e f g h i i k k k k l l l l m m n n o o The diaphragm. M M N N O O P P Q Q R R S T U U V W X Y Z *C D H L X P P S S S W Y O* a b c c that part which lies next the abdomen. d e f g h i i k k k k l l l l m m n n o o the part which lies next the thorax. M N O P. M N O P the firſt heads; M M the tendinous expanſions which ariſe from the ligaments, which run on the ſurfaces of the bodies of the vertebrae of the loins, and join to thoſe heads outwardly; at N N below they ariſe with a thick tendon O, from the lower part of the body of the third vertebra of the loins: P P the fleſhy portions in which thoſe tendons terminate. Q Q the ſecond heads. R R the third heads. S S the fourth head of the left ſide. T a beginning which I have ſometimes found ariſing from the ſurface of the quadratus of the loins. U U the firſt fleſhy parts of the diaphragm formed by the conjunction of its heads. V a portion of the left firſt head going to the firſt fleſhy portion of the right ſide, and afterwards running through the right margin of the hole through which the gula paſſes out. W part of the firſt right head, which going behind the portion V, croſſes the ſame, and goes beyond it in the firſt left fleſhy part. X the hole through which the gula paſſes out. Y Z *C D* the left part of the middle tendon, of which the part Y ariſes from the firſt fleſhy portion, and goes into the ſecond fleſhy portion of the left ſide Z; *C* a part climbing over the former and croſſing the ſame. *D* climbs over the next part, *C* croſſes it and goes into the ſecond fleſhy portion of the left ſide in the lower part. *H* the ſecond left fleſhy portion; *L X* its extremity inſerted into the twelfth rib as well the bony part *L*, as the cartilaginous *X*: *P P* the margin of it cut off where it was continued to the tranſverſalis of the abdomen betwixt the two laſt ribs. *S S S W* the ſecond right fleſhy portion, here *W* firſt climbing over and croſſing, ſoon afterwards becomes tendinous.

In the Trunk and lower Extremities.

Y O a portion ſometimes found in one, and ſometimes in both ſides, forming the lower margin of the diaphragm in this part; and which in this body (but variouſly in others) ariſes from the tranſverſe proceſs of the fourth ver-

TAB. IV.



A. Bell Sculpt.

TAB. IV.

A Bell, Sculp.

tebra of the loins, and alſo from that of the fifth, firſt of all tendinous *Y*; (but differently in different ſubjects) and then the fleſhy portion *O* joins itſelf to the ſecond fleſhy part *S*, uniting with it behind a, and is inſerted into the cartilage of the twelfth rib b. c c the margin cut off which was continued to the tranſverſalis of the abdomen betwixt the two laſt ribs. d the middle tendon in which the tendinous fibres croſs each other. e f the fleſhy parts right and left. g the extremity of the middle fleſhy part that belongs to the enſiform cartilage from whence it is cut off at h. i i the extremities which unite to the peritonaeum. k k k k the extremities cut off from the inner ſide of the ſeventh rib. l l l l thoſe from the eighth rib. m m thoſe from the ninth. n n thoſe from the tenth. o o thoſe inſerted into the eleventh rib.

p q q. p q q The ſquare muſcles of the loins. q q the origin from the ſpine of the os ilium beginning outwardly tendinous.

r s The ſmall pſoas. s the tendon. The left is not exhibited.

t u v w x. t u v w x The great pſoae or lumbal muſcles. u the third head and its origin from the lower part of the body of the fourth vertebra of the loins, and from the ligament interpoſed betwixt that and the body of the third vertebra. v the fourth head, and its origin from the lower part of the body of the third vertebra of the loins and the ligament betwixt that and the ſecond. w the fifth head and its origin from the lower part of the body of the ſecond vertebra of the loins and the ligament betwixt that and the body of the firſt. x the tendon which joins to the fleſhy part of the iliacus internus.

y z z z. y z z z The internal iliacs. z z z the origin from the edge of the os ilium.

a b. a b The external obturators. *b* The origin from the os pubis.

c d d e The penis cut off. *d d* the larger cavernous bodies. *e* the leſs cavernous body with the urethra.

f f The erectors of the penis.

g g The accelerators.

h The external ſphincter of the anus.

i i The tranſverſe muſcles of the perinaeum.

k l m n o p. k l m n o p The large adductors of the thighs. *k* the origin from the os pubis. *l m n* The portions which are in ſome meaſure diſtinguiſhed from each other chiefly by the courſe of their fibres, which all together make the upper part of this muſcle inſerted along the poſterior rough line of the thigh bone. *o p* the part which is more diſtinct going from thence to the lower extremity belonging to the inner condyle: *p* the tendon ariſing from the fleſhy part.

q r ſ ſ t u u w w x y. q r ſ ſ t u u w w x y The tibiales poſtici. *r* the beginning that ariſes from the tibia. *ſ ſ* the origin from the tibia. *t* the beginning of its origin from the fibula. *u u* the origin itſelf from the fibula. *w w x y* the tendon inſerted into the navicular bone *x*, and running along in a more ſlender portion to the great cuneiform bone *y*.

z C C D. z C C The ſhort peronei. *C C* the origin from the fibula. *D* the tendon.

H H The firſt interoſſei of the ſecond toes ariſing from the metatarſal bones of thoſe toes.

L L The heads of the ſecond interoſſei of the ſecond toes which ariſe from the metatarſal bones of the third toes.

X X The heads of the ſecond interoſſei of the third toes ariſing from the metatarſal bones of the fourth toes.

P P The heads of the ſecond interoſſei of the fourth toes which ariſe from the metatarſal bones of the fifth.

S The adductor of the great toe.

In the Shoulders, Arms, and Hands.

W Y O a. *W Y O* a The ſubſcapulares. *Y* the tendinous ends inſerted into the leſs unequal protuberance of the upper head of the humerus *O* a: the fleſhy part inſerted into the humerus below the ſaid tubercle.

b c d d e e f. b c e f The ſhort ſupinators. c the tendon by which it begins. d d its inſertion round the tubercle of the radius and into the radius itſelf below the ſaid tubercle e e. The poſterior part f appears betwixt the ulna and radius.

g. g h i k k The ſquare pronators. h the tendinous ſurface. i the origin from the ulna. k k the inſertion into the radius.

l m n o p q. l r The ſhort flexors of the thumbs. m the origin from the leſs multangular bone, from the unciform bone n, and from the cuneiform bone o. p the other tail inſerted by a tendinous end into the ſeſamoide bone that is fartheſt from the index. q the other inſerted alſo by a tendinous end into the ſeſamoide bone that is neareſt the index, and into the next part of the firſt bone of the thumb. r the aponeuroſis which the ſhort flexor ſends out, and which joins with the aponeuroſis inveſting the capſule that joins the thumb with its metacarpal bone, and together therewith adheres to the common tendinous extremity of the extenſors of the thumb, the extremity of which is here cut off.

s t u. s u The adductors of the thumbs. t the origin from the metacarpal bone of the middle finger. u the tendinous end inſerted into the firſt bone of the thumb

v w The outer interoſſeus muſcle of the index which is inſerted by a tendinous end w, into the firſt bone of the ſaid index.

x The poſterior or inner interoſſeus of the index. y its tendon, which being increaſed by a portion received from the tendon of the extenſors of the index, runs to the third bone of the ſaid index.

z The outer interoſſeus muſcle of the middle finger.

a The tendon of the ſecond lumbrical muſcle cut off.

b The tendon common to the ſecond lumbrical and outer interoſſeus muſcles of the middle finger, which tendon being increaſed by a portion received from the tendon of the common extenſor belonging to the middle finger, runs at laſt to the third bone of the ſaid middle finger.

c The inner interoſſeus muſcle of the middle finger. *d* its tendon, which being increaſed by a portion received from the tendon of the common extenſor belonging to the middle finger, runs at laſt to the third bone of the ſaid middle finger.

e f The outer interoſſeus muſcle of the ring finger. *f* its origin from the metacarpal bone of that finger

g The tendon of the third lumbrical muſcle cut off.

h The tendon common to the third lumbrical and outer interoſſeus muſcle of the ring finger, which tendon being increaſed by a portion received from the tendon of the common extenſor belonging to the ring finger, runs to the third bone of the ſaid ring finger.

i k The inner interoſſeus muſcle of the ring finger. *k* its origin from the metacarpal bone of that finger. *l* its tendon, which being increaſed by a portion received from the tendon of the common extenſor belonging to the ring finger, runs to the third bone of that finger.

m n The interoſſeus muſcle of the little finger. *n* its origin from the metacarpal bone of that finger.

o The tendon of the fourth lumbrical muſcle cut off.

p The tendon common to the fourth lumbrical and interoſſeus muſcle of the little finger, which tendon being increaſed by a portion received from the tendon of the extenſors of the little finger, then runs to the third bone of the ſaid finger.

THE

Fifth Anatomical Table

OF THE

HUMAN MUSCLES

EXPLAINED.

THE Figure of this table is the back part of that contained in the firſt muſcular table; and it repreſents the whole ſyſtem of the outer muſcles together, after the common integuments and tendinous coverings are removed: It alſo repreſents many of the ligaments belonging to the muſcles, with the ears, part of the ſcrotum, and naked parts of the Skeleton.

In the Head, Neck, Back, and Thighs.

a b c. a b c d d. e The epicranius or occipito-frontal muſcles. a b the occipitalis. a its tendinous beginning. b its fleſhy part. c d d the tendinous expanſion betwixt the occipitalis and frontalis. d d ſhews the temporal muſcle through the ſaid expanſion protuberant. e the membranous part by which the occipitales and their aponeuroſes are joined together, ariſing above the origin of the cucullares from the occipital bone.

f g The elevator of the outer ear. f its tendinous beginning which goes off from the epicranius. g the fleſhy part.

h The frontal muſcle.

i The orbicular muſcle of the eye-lids.

k The anterior muſcle of the outer ear.

l The leſs muſcle of the helix

m n o The three muſcles drawing back the outer ear.

p q The maſſeter. p the back part of its inward portion, which is not covered by the outer portion. q the outward portion.

r The greater zygomatic muſcle.

ſ the internal pterygoide muſcle.

s The mylohyoideus muſcle.

t The latiſſimus colli or broadeſt muſcle of the neck.

u w x The ſternomaſtoideus with the cleidomaſtoideus conjoined together into one. w the tendinous end inſerted into the occipital bone at x.

y y The biventral muſcle of the neck inſerted into the occipital bone.

z z The ſplenii muſcles of the head.

A the elevator muſcle of the ſcapula or ſhoulder-blade.

B C D E F G H H. B C D E F G H H The cucullares. B the fleſhy part. C D E F the tendinous beginning. C the part ariſing from the occipital bone and adhering outwardly with its fellow muſcle along the tract D E F, which ariſes internally from all the ſpines of the back, the two lowermoſt of the neck, and the cervical ligament. E the tendinous expanſion of its beginning which is broader towards the bottom of the neck and upper part of the back. F another part of the ſame in the lower angle. G the end of the tendinous part which is inſerted into the ſpine of the ſcapula not far from its baſis. H H the tendinous part of the extremity inſerted into the ſpine of the ſcapula and its upper proceſs.

I K. I K The infraſpinatus on each ſide. K its origin from the baſis of the ſcapula.

L L The larger rhomboidal muſcles inſerted into the baſis of each ſcapula.

M M The ſacrolumbales muſcles.

N N the leſs teretes.

O O The larger teretes.

P Q R R S T V. P Q R R S T V The latiſſimi dorſi or broadeſt muſcles of the back. P the fleſhy part. Q The broad tendon by which it ariſes. R R its origin from the ſpines of the vertebrae of the loins and os ſacrum. S its origin from the oblique proceſſes that are at the ſides of the opening of the os ſacrum. T its adheſion with the gluteus magnus. V its origin from the ſpine of the ilium.

W X. W X The fleſhy parts of the external oblique muſcles of the abdomen, X X their inſertions into the ſpines of the oſſa ilia.

Y Z. Y Z *a* The middle glutei. Z the origin from the os ilium. *a* the tendon.

b b The extenſors of the tendinous coverings of the thighs.

c d d. c d d The largeſt glutei. *d d* in this part it ariſes from the ſpine of the ilium and os ſacrum, and coheres with the latiſſimus dorſi.

e The elevator of the anus. A ſmall part of the right elevator may be alſo ſeen on the right ſide.

Betwixt *f* and *g* is the tranſverſe muſcle of the perinaeum.

g The external ſphincter of the anus.

h h The large adductors of the thighs.

i k. i k The graciles. *k* the tendon.

l l The ſartorii, or Taylor's muſcles.

m m The internal vaſt muſcles.

n n o p. n n o p The ſemimembranoſi. *o* the origin of the tendon from the fleſhy part. *p* the tendon.

q r. q r The ſeminervoſi or ſemitendinoſi. *r* the tendon.

ſ t t u w x. ſ t u u w y The bicipital muſcles of the legs. *ſ* the longer head. *t t* the ſhorter head. *u w x* the tendon. *u* the firſt portion ariſing from the ſurface of the fleſhy part of the longer head, and afterwards increaſed by the joining of the ſhorter head *x*, *w* the extremity inſerted into the upper head of the fibula.

y z. y z The external vaſti. *y* the tendinous ſurface.

C c. C c The plantares.

In the Legs and Feet.

D D The poplitei or muſcles of the hams.

H l, &c, *H l*, &c. The long peronei.

L X X P S S W. L X X P S S W The gemelli or gaſtrocnemii muſcles. *L X X* the outer head. *X X* the tendinous ſurface. *P S S* the inner head, *S S* the tendinous ſurface. *W* the tendon which forms part of the tendo Achillis.

Y O. Y O The tendons called Achillis inſerted into the heel bones *O O*.

a a b, a a b The ſolei. b the tendinous ſurface.

c c The tendons of the plantal muſcles.

d d The tendons of the tibiales poſtici.

Betwixt the tendons d and *y* in the left foot; and d and the tendon of the right plantaris, appear the tendons of the long flexors of the toes.

e e The ligaments which confine the tendons near the internal ancles under which they paſs along.

f f The long flexors of the great toes.

g h i i k. g h i k The ſhort peronei. h the origin of the tendon from the fleſhy part. i i the tendon. k its inſertion into the fifth metatarſal bone.

l m m m. l m m m The long peronei. m m m the tendon.

n n The ligaments by which the tendons of the long and ſhort peronei are retained at the outer ancles.

o o The ligaments proper to the ſhort peronei.

p p The ligaments proper to the long peronei.

q q The ligaments by which the tendons are confined at the bottom of the leg and upon the back of the foot.

r r The tendons of the long extenſors of the toes.

s s The tendons of the third peronei inſerted into the metatarſal bones of the little toes.

t t The ſhort extenſors of the toes.

u w x y z. u w x y z The abductors of the little toes, in the part u covered with a tendinous expanſion. w its origin from the calcanium. x the aponeuroſis that covers the part which is inſerted into the metatarſal bone of the little toe. y the tendon of the abductor inſerted into the firſt bone of the little toe. z the aponeuroſis which joins the tendon of the long extenſor belonging to the little toe.

a b. a The ſhort flexors of the little toes. *a* the part inſerted into the metatarſal bone of the little toe. *b* the part inſerted by a tendinous end into the firſt bone of the little toe.

c c The tendon of the long flexor of the great toe, paſſing along betwixt the ſeſamodial bones.

d The abductor of the great toe.

e The ſhort flexor of the toes.

In the Arms.

f g g h i k l m n. f g g h i k l m The deltoide muſcles. *f g g* the firſt order of the portions of which it is compoſed, *g g* the ſecond and poſterior order, ariſing from the ſpine and upper proceſs of the ſcapula. *h i* the poſterior portion of the ſecond order, ariſing from the upper proceſs *i*. *k l* the fourth portion of the ſecond order, ariſing with the flexor of the cubit from the upper proceſs *l*. *m n* the middle portion of the ſecond order, ariſing from the upper proceſs *n*.

o p q r ſ t u w x. o p q r ſ t u w x The tricipital extenſors of the arms. *o* the brevis. *p* the longus. *q* the brachialis externus. *r* the common tendon of theſe three heads. *ſ* the tendinous part that is formed by the longus and joins the common tendon. *t* the tendinous part in the right arm, formed by the external brachialis, and joining the common tendon: in the left arm *t* is placed at the origin of this tendon from the fleſhy part. *u* the tendinous part ariſing from the ſurface of the external brachialis, and belonging to the greater condyle of the humerus. *w* the common tendon inſerted into the elbow. *x* the thinner horn of the ſaid tendon, inſerted into the anterior edge of the elbow, and adjacent ſpine of the ulna.

y y The internal brachiales.

z z The long ſupinators.

In the Fore-arms and Right Hand.

A B C D D D D. A B C The longer external radiales. B the origin from the leſs condyle of the humerus. C its conjunction and common origin with the common extenſor of the fingers and outer ulnaris. D D D D the tendon inſerted into the metacarpal bone of the index.

E E The external brachiales ariſing from the roots of the leſs condyles.

F G. F. The anconei. G the tendon ariſing from the leſs condyle of the humerus.

H. H I I I. The ſhorter external radiales. I I I the tendon.

K. K The profound flexors, ariſing from each ulna.

L L The long palmares.

M. M N O P Q The ſublime flexors. N the portion belonging to the middle finger. O that to the index. P that to the ring finger. Q that to the little finger.

R S T V. R S T V The internal ulnares. S T their originations, S ariſing from the greater condyle of the humerus and cohering with the common

TAB. V.

A. Bell Sculp.

TAB. V.

A. Bell Sculp.t

tendinous head of the muſcles ariſing from that condyle: the other origin T is from the elbow. V the tendon inſerted into the piſiform bone of the wriſt.

W X Y Y. W X Y Z The external ulnares. X its beginning conjoined with the beginning of the common extenſor of the fingers. Y Z the tendon belonging to the fourth metacarpal bone of the hand Z. Betwixt the tendon Z and the tendon c on the back of the right hand is a ſmall tendon from this external ulnaris to the little finger.

a b c c. a b c c The extenſors proper to the little fingers. b the origin conjoined with the origin of the common extenſors of the fingers. c c the tendon which runs in a ſmall degree ſplit, over the back of the hand.

d. d e f f g h i k l m n o p p q r r s The common extenſors of the fingers. e f f g h i k l m n o the portion belonging to the ring finger. f f the tendon which runs to the ring finger, having fiſſures as it paſſes along over the back of the hand. g a branch of this tendon which afterwards ſplits into two, one of which joins itſelf to the tendon c of the little finger, but is not always found; the other i divides again into two, of which k likewiſe joins the tendon c of the little finger, while the other (betwixt k and f below) goes to the trunk f of the little finger: l is a portion going off from the tendon f to the tendon c of the little finger: m the tendinous portion by which the trunk of the tendon f running to the ring finger joins the tendon of the little finger at the beginning of the fingers; which portion is compoſed of the two k and l, conjoined into one, below this, where the aponeuroſis goes off from the tendon f. n the branch joining itſelf to the tendon p of the middle finger, not always found. o the tendinous portion by which the trunk of the tendon f running to the ring finger joins to the tendon p of the middle finger near its root or bend; and this portion is made up from the tendon n meeting with the aponeuroſis which goes off from the trunk of the tendon f of the ring finger, near its root or joint. p p the tendon to the middle finger, in which is a fiſſure according to its courſe over the back of the hand. q r r the portion belonging to the index, r r the tendon. s the aponeuroſis which, ariſing from the tendon p of the middle finger, goes to the tendon r of the index, and conjoins thoſe tendons to each other at the roots of the fingers.

t The tendon of the indicator.

u The common tendon extending the index, formed of the tendon t of the indicator, and the tendon r of the common extenſor to the index, joined together into one.

v w x y z z z z The tendons of the extenſors of the fingers conjoined with the tendons and aponeuroſes of the interoſſei and lumbricales as they paſs along the backs of the fingers, &c. v that of the index formed of the tendon t of the indicator conjoined with the tendon r of the common extenſor. w that of the middle finger, x that of the ring finger, both which are from the common extenſor; y that of the little finger, which is formed of the tendon c, of the proper extenſor of the little finger, conjoined with the portions h and k l m from the common extenſor, joining with a portion from the extenſor carpi ulnaris externus. z z z z the extremities of theſe tendons inſerted into the bones of the ſecond phalanx.

α The aponeuroſis, from the capſule of the joint of this finger, with its metacarpal bone, and belonging to the tendon of the extenſor y.

b c The abductor of the little finger. *c* the tendon.

d e The common tendon of the abductor and ſhort flexor of the little finger, conjoined at *d* with the tendon y, and being increaſed by a portion received from thence, it runs to the third bone of that finger.

f The aponeuroſis which joins the tendon y, ariſing in its upper part from the capſule of the joint of this finger with the metacarpus, and below ſpringing from the tendon *g* of the interoſſeus of the little finger, with which tendon is conjoined the tendon of the fourth lumbricalis.

g The tendon of the interoſſeus of the little finger, to which is joined the tendon of the fourth lumbricalis.

h i The common tendon of the interoſſeus of the little finger and fourth lumbricalis, conjoined at *h* with the tendon y, and being increaſed by a portion received from thence runs to the third bone *i*.

k The common end in which the tendons *e i* unite and go to the third bone.

l The aponeuroſis which goes to the tendon x, in its upper part coming from the capſule of the joint of this finger with the metacarpus: and below ſpringing from the tendon *n* of the inner interoſſeus of the ring finger.

m m n o p The inner interoſſeus of the ring finger. *n* the tendon which afterwards joins at *o* with the tendon x, and being increaſed by a portion received from thence, runs to the third bone *p*.

q The aponeuroſis which joins the tendon x, ariſing in its upper part from the capſule of the joint of this finger with the metacarpus: in its lower part ſpringing from the tendon *r* of the outer interoſſeus of the ring finger, with which tendon is conjoined the tendon of the third lumbricalis.

r The tendon of the outer interoſſeus of the ring finger, to which the tendon of the third lumbricalis joins itſelf.

s t The tendon common to the outer interoſſeus of the ring finger and third lumbricalis, conjoined at *s* with the tendon x, and being increaſed by a portion received from thence, runs to the third bone *t*.

x The common end in which the tendons *p t* unite, and go to the third bone.

w The aponeuroſis that goes to the tendon w, coming in its upper part from the capſule of the joint of this finger with its metacarpus: below ſpringing from the tendon *y* of the inner interoſſeus of this middle finger.

x y z C The inner interoſſeus of the middle finger. *y* the tendon which afterwards joins at *z* with the tendon w, and being increaſed by a portion received from thence, runs to the third bone *C*.

D The aponeuroſis that joins the tendon w, coming above from the capſule of the joint of this finger with its metacarpus: in its lower part produced by the tendon *X* of the outer interoſſeus of this middle finger, with which tendon is conjoined the tendon of the ſecond lumbricalis.

H H H L X The outer interoſſeus of the middle finger. *H H H L* the heads ariſing from the metacarpal bone of the index *H H H* and middle finger *L*, *X* the tendon with which is conjoined the tendon of the ſecond lumbricalis.

P S The tendon common to the outer interoſſeus of the middle finger with the ſecond lumbricalis, conjoined at *P* with the tendon w, and being increaſed by a portion received from thence, runs to the third bone *S*.

W The common end in which the tendons *G S* unite and go to the third bone.

Y The aponeuroſis that joins the tendon v, in its upper part coming from the capſule of this joint with the metacarpus: in its lower part produced from the tendon 2 of the inner interoſſeus muſcle of this finger, the index.

1 2 3 4 The inner interoſſeous muſcle of the index. 2 the tendon that afterwards joins itſelf to the tendon v, and being increaſed by a portion received from thence it runs to the third bone 4.

5 6 The aponeuroſis that joins the tendon v, being in its upper part a production from the tendon of the abductor of the index; and in its lower part 6, from the firſt lumbricalis.

7 The tendon of the firſt lumbricalis, which afterwards conjoins itſelf 8 with the tendon v, and being increaſed by a portion received from thence, runs to the third bone 9.

10 The common end in which the tendons 4 and 9 unite themſelves, belonging to the third bone.

11 The outer interoſſeous muſcle of the index.

12 The abductor of the index.

13 The tendon of the greater extenſor of the thumb.

14 15 The ligament that confines the tendon of the ulnaris externus, ariſing from the radius betwixt the ſaid ulnaris and extenſor of the little finger, and terminating at the tendon of the ulnaris internus; in the part 15 it is conjoined with the ligament 16.

16 17 18 19 The outer annular ligament, which ariſes from the piſiform bone 17, from the cuneiform bone 18, and from the eminence of the radius 19, which terminates the fore part of the groove that conducts or gives paſſage to the tendons of the radiales externi.

20 The ligament that confines the tendons of the long abductor and leſs extenſor of the thumb, in one part ariſing from the eminence of the radius, from which alſo ariſes the ligament 16.

21 22 23 23 The long abductor of the thumb. 22 the tendon of its upper part. 23 23 the tendon of its lower part.

24 25 The leſs extenſor of the thumb. 25 the tendon.

26 The common end in which are conjoined the tendons (13 and 25) of the greater and leſs extenſors of the thumb, and belonging to the third bone.

27 28 The aponeuroſis which joins itſelf to the common end (26) of the tendons of the extenſors of the thumb, part of which aponeuroſis (27) inveſts the capſule of the joint of the thumb with its metacarpal bone, and adheres to the ſaid capſule; while the part (28) ariſes from the inner tail of the ſhort flexor of the thumb.

Betwixt 27 and 29 is the inner tail of the ſhort flexor of the thumb.

29 30 The adductor of the thumb. 30 the tendinous end inſerted into the firſt bone of the thumb.

In the lower part of the Left Elbow, and Left Hand.

a b The outer annular ligament, inſerted into the piſiform bone *b*, and continued to the ligament *c d*.

c d the ligament that confines the tendon of the ulnaris externus, ending by the tendon of the ulnarus internus at *d*.

e The ſquare pronator muſcle.

f The ligament, which with the groove of the wriſt forms a channel wherein are confined the tendons paſſing from the elbow to the hand, namely, of the ſublime and profound flexors, and of the long flexor of the thumb.

g Part of the tendon given from the long to the ſhort abductor of the thumb.

h i k The ſhort abductor of the thumb. At *i* it receives a part from the aponeuroſis of the long palmaris. *k* the tendinous end with the aponeuroſis which it gives to the tendon of the extenſors of the thumb.

l Part of the ſhort flexor of the thumb, which may be eſteemed a ſecond ſhort abductor of it: 'tis inſerted with its tendinous end into the firſt bone of the thumb.

m Two ligaments which confine the tendon of the long flexor of the thumb; the one ſeated above, at the joint of the thumb with its metacarpal bone; the other, juſt below the former, is affixed to the edges of the firſt bone, beginning ſimple, but afterwards ſplit into two horns.

n n The tendon of the long flexor of the thumb, inſerted into the laſt bone of the thumb.

o The inner tail of the ſhort flexor of the thumb, inſerted into the firſt phalanx and inner ſeſamoide bone.

p The firſt lumbricalis.

q The adductor of the thumb.

r The aponeuroſis or tendinous expanſion of the long palmaris muſcle.

s s The ſquare or ſhort palmaris muſcle.

t u w The abductor of the little finger, *u w* its origin from the piſiform bone *u*, and from the inner ligament of the wriſt *w*.

x The ſmall flexor of the little finger.

y The tendon common to the ſmall flexor and abductor of the little finger, conjoined with the tendon of the extenſor of that finger.

z The end of the tendon of the extenſor of the little finger belonging to the third bone.

C The tendon running to the third bone, formed of the tendon *Y*, and joined by a portion of the tendon of the extenſor of the little finger.

D D The tendons correſponding to thoſe of *p t u* 4 9 10, in the right hand.

H The ligament by which are confined the tendons of the ſublimis and profundus, as they paſs along the bone of the firſt phalanx or order.

L Three ligaments by which are retained the tendons of the ſublimis and profundus at the joint of the finger with the metacarpus. We have fixed the letter only on the middle finger, but the ſame ligaments are alſo in the fore and ring finger.

X The tendons of the ſublimis and profundus.

P The tendon of the profundus with one horn of the ſublimis.

S The tendon of the profundus.

The ſame parts (*H L X P S*) are alſo pointed out in the other fingers.

THE

Sixth Anatomical Table

OF THE

HUMAN MUSCLES

EXPLAINED.

IN this Figure are expreſſed the ſecond order of the muſcles in the back part of the body, together with ſome of the ligaments and naked parts of the Skeleton, with part of the ſcrotum. This correſponds to the figure of the ſecond table, of which this is the back view; but there is this difference, that in the preſent figure the Sternomaſtoidei and Cleidomaſtoidei muſcles are taken away, the back parts of thoſe muſcles having been ſufficiently repreſented in the fifth table.

The muſcles exhibited in the laſt preceding table, and here taken away, are from the head, the epicranius, the elevator of the outer ear, the anterior and three retractive muſcles of the outer ear, the ear itſelf, the orbicularis of the eye-lids, the geater zygomatic, and the latiſſimus colli. From the neck, back, and loins, are taken away the ſternocleinomaſtoidei, the cucullares, latiſſimi dorſi, and external oblique muſcles of the abdomen, and alſo from the left ſide of the back is removed the greater and leſs rhomboides. From the hips and nates are taken the large glutei. From the thighs the ſartorii. From the legs the gaſtrocknemii. From the feet the ligaments by which the tendons are confined near the inner ancles, the ligaments by which the tendons of the long and ſhort peronei are retained at the outer ancles; the ligaments proper to the ſhort peronei, the ligaments peculiar to the long peronei, the ligaments by which the tendons are confined at the bottom of the leg, and upon the backs of the feet, the abductors of the little toes; the aponeuroſes joining the tendons belonging to the little toes to the tendons of the long extenſors of the other toes. From the arms are taken the deltoidei. From the fore-arms and beginning of the hands are taken the long ſupinators, the common extenſors of the fingers, the extenſors proper to the little fingers, the external ulnares, the long palmares, the outer circular ligaments, the ligaments which confine the tendons of the outer ulnares. Alſo from the extreme part of the right fore arm is taken the ligament by which are confined the tendons of the long abductor and ſhort extenſor of the thumb. From the left hand likewiſe is taken the ſhort palmaris, the ſhort abductor of the thumb, the ligaments by which is confined the tendon of the long flexor of the thumb, the ligaments by which are confined the tendons of the ſublimis and profundus at the joints of the fingers, with their metacarpal bones, and thoſe by which the tendons are confined at the firſt bones of the fingers.

In the Head, Neck, and Back.

A B B B C D The temporal muſcle. B B B C the firſt beginning of its origin from the convexity of the parietal bone B B B, and from the mammillary proceſs C. B the tendon.

E F G H The maſeter. E F the outer portion, F the extremity inſerted into the lower jaw. G H the back part of the inner portion, which is not covered by the outer portion; H its origin from the zygomatic proceſs of the temporal bone and from the os jugale.

I The internal pterygoideus muſcle, inſerted into the lower jaw.

K The mylohyoideus ariſing from the lower jaw.

L The firſt belly of the digaſtric muſcle of the lower jaw.

M N. M N The biventers or digaſtrics of the neck. N the tendinous end inſerted into the occipital bone. Soon after O beneath appear the two interſpinales colli betwixt the ſpine of the fifth and ſixth vertebra of the neck.

P Q R S. P Q R S The ſplenei muſcles of the head. Q the beginning or riſing from the ligament of the next. R S the tendinous end inſerted into the occipital bone R, and into the mammillary bone and proceſs S.

T. T U V The ſplenei muſcles of the neck. U V the beginnings of which one U ariſes from the ſpine of the tenth vertebra of the back, and the other V from the ninth.

W W The trachelomaſtoidei muſcles.

X X Portions of the longiſſimi dorſi muſcles running to the neck.

Y Y The tranſverſe muſcles of the neck.

Z a. Z a The elevators of the ſhoulder blades, a ariſing from the ſcapula.

æ b, æ b c d e f g h i k l The poſterior and upper ſerrati. æ the tendinous part, b the fleſhy part, c d e f the origin from the ligament of the neck c, from the ſpine of the lower vertebra of the neck d, and the uppermoſt of the back e, and from the eleventh f. g h i k l the four extremities, of which g belongs to the ſecond rib, h to the third, i to the fourth, and k l to the fifth, inſerted into that rib at l.

m n o The leſs rhomboides. n the tendinous beginning ariſing from the ligament of the neck. o the end inſerted into the ſcapula, the left rhomboides is removed.

p p q r s t u v w x x The greater rhomboides. p p the tendinous begininng. q the fleſhy part. r s t u v the origin from the ſpines of the vertebræ, r that from the loweſt of the neck, from the twelfth of the back s, from the eleventh t, from the tenth u, from the ninth v. w in this part it is incurvated according to the baſis of the ſcapulæ without inſerting itſel f. x x its inſertion. The left is removed.

y The biventer of the neck.

z The ſemiſpinalis muſcle of the back.

a b c d e f g h i. a b c d e f g h i The ſpinales of the back. *b* the portion that belongs to the ſpine of the eleventh vertebra of the back: *c* that to the tenth: *d* that to the ninth: *e* that to the eighth: *f* that to the ſeventh: *g* that to the ſixth: *h* that to the fifth. *i* the head by which it ariſes from the ſpine of the third vertebra.

k l. k l The longiſſimus dorſi muſcle. *l* the tendinous part.

m n o p q r ſ ſ t u. m n o p q r ſ ſ t u The ſacrolumbales. *m* the fleſhy part *n* the tendinous tail that belongs to the ninth rib: *o* that to the eighth: *p* that to the ſeventh: *q* that to the ſixth: *r* that to the fifth: *ſ* that to the fourth: *ſ* that to the third: *t* that to the ſecond: *u* that to the firſt.

w x y z C D D H L: z C D D H L The outer intercoſtals. *w* the fourth with the elevator of the fifth rib, *x* the fifth, *y* the ſixth, *z* the ſeventh, *C* the eighth, *D D* the ninth, *H* the tenth, *L* the eleventh.

X X The eleventh internal intercoſtals.

In the ſide of the Thorax, and lower part of the Trunk.

P S W Y O A B. *P S W Y O* A B The great ſerrati muſcles. *S* the head that ariſes from the fifth rib: *W* that from the ſixth: *Y* that from the ſeventh: *O* that from the eighth: A that from the ninth: B that from the tenth rib.

C D E E F G G H I K L. C D E E F G G H I K L The poſterior and lower ſerrati. C the tendinous part. D F H K the fleſhy part. D the firſt head inſerted into the ninth rib E E. F the ſecond head inſerted into the tenth rib G G. H the third head inſerted into the eleventh rib I. K the fourth head inſerted into the twelfth rib L.

M N O O P Q R S T. M N O O P Q R S T The internal oblique muſcles of the abdomen. M the fleſhy part. N the tendinous part. O O the tendinous beginning from the ſpine of the ilium. P Q the extremity inſerted into the twelfth rib, into the bony part P and cartilage Q. R S the end inſerted into the eleventh rib, into its bony part R and its cartilage S. T the end that belongs to the tenth rib.

U V W X Y Z a b b b. U V W X Y Z a b b b The broad tendons by which the latiſſimi dorſi begin. V W its orgin from the ſpines of the two lower vertebræ of the back, and all thoſe of the loins and os ſacrum. X Y its origin from the two oblique proceſſes which are placed at the ſides of the opening of the canal of the os ſacrum in its lower part. Y Z the part in which it adhered with the gluteus magnus. a its origin from the ſpine of the ilium. b b b the broad tendon here cut off, where it no longer adheres with the tendon beneath, by which ariſe the lower ſerratus poſticus and internal obliquus of the abdomen.

c c The multifide muſcle of the ſpine.

d d The coccygei muſcles.

e e The elevators of the arms.

f The external ſphincter of the arms.

g g The ſecondary tranſverſe muſcles of the perinæum ariſing from the oſſa pubis.

h h The tranſverſe muſcles of the perinæum ariſing from the tubercles of the iſchia.

i k k k l. i k k k l The middle glutei in which are impreſſed the footſteps of the largeſt glutei (conſult Tab. V.) k k k the origin from the os ilium. l the tendon inſerted into the greater trochanter.

m The great pſoas.

n o p. n o p The pyriform muſcles. o the origin from the os ilium, p the tendon.

q r. q r The upper of the gemini. r the tendinous extremity. s t u. s t u the lower of the gemini. t the origin from the tubercle of the iſchium. u the tendinous end.

v v. v v The external obturators.

w w x y. w x x y The internal obturators. w the portion ſeated in the pelvis, where the part x ariſes from the anterior face and margin of the great foramen of the os innominatum. y the part which goes along the back of the os ilium betwixt the gemini.

TAB. VI.

A Bell Sculpt.

TAB. VI.

A. Bell, Sculp.

In the Thighs, Legs, and Feet.

Z a a. Z *a a* The quadrati of the thighs. *a a* the end inſerted into the thigh bone.

b c d d. b c d d The external vaſti. *c* the tendinous part. *d d* its origin from the thigh bone.

e e f f g h h. e e f f g h h The large adductors of the thighs. *f f* the origin from the tubercle of the iſchium. *g* part of the tendinous beginning. *h h* part of the extremity inſerted into the thigh bone.

b i k l l m n o. b i k l l m n o The bicipital muſcles of the legs. *b i k* the longer head. *i k* the tendon by which it begins and ariſes from the back of the tubercle of the iſchium which joins the beginning of the ſemitendinoſus, *l l* the ſhorter head. *m n o* the common tendon in which terminate the two heads; *m* ariſing firſt from the fleſhy ſurface of the longer head, and then being increaſed by joining the ſhorter head *n*, at length terminates with a ſhort extremity *o* in the upper head of the fibula.

p q r ſ s p q r ſ s The ſemitendinoſi. *q* the tendinous part of its origin, ariſing from the back of the tubercle of the iſchium *r*, it then joins the tendinous beginning of the longer head of the biceps of the leg, from which beginning it departs. *ſ* the origin of the fleſhy part which is ſometimes tendinous ariſing from the back of the tubercle of the iſchium. *ſ* the tendon.

v t. v t The graciles. *t* the tendon.

u. u The internal vaſti muſcles.

w w x y z C. w w x y z C The ſemimembranoſi. *x* the origin of the tendon from the fleſhy part, *y* the tendon. *z* the more conſiderable part of the tendon inſerted into the oblique rough eminence which is below the back part of the root of the upper head of the tibia, where it ſuſtains the inner condyle of the thigh bone. *C* the thinner portion which the tendon ſends off to the inner edge of the tibia.

D D The inner heads of the gemelli or gaſtrocnemii of the legs, *H H* the outer heads cut off.

L L X P. L L X P The poplitei. *X* the tendon by which it ariſes. *P* the tendinous ſurface.

S W. S W. The plantares. *W* the tendon.

Y Y O O O A B B. *Y Y O O O* A B B The ſolei muſcles. *O O O* the tendinous ſurface by which the tendon of its back part begin. A the origin from the upper head of the fibula. B B a mark like a notch where is a tendinous part within the fleſh, dividing the ſaid muſcular fleſh like a tendinous partition.

C C The tendons of the gemelli cut off.

D E. D E The tendons of Achilles inſerted into the heel bones E E.

F F The tendons of the long flexors of the toes.

G G The tendons of the tibiales poſtici.

H H The long flexors of the great toes.

I K L M. I K L M The ſhort peronei. K the origin of the tendon from the fleſhy part, L the tendon inſerted into the metatarſal bone M of the little finger.

N N O P Q R S T. N N O P Q R S T The long peronei. O the origin from the root of the upper head of the fibuls. P the origin of the tendon from the fleſhy part. Q R S T the tendon. R S T the knots or bendings. R that where the tendon inflects itſelf at the outer ancle; S the ſecond which is at the eminence of the heel bone; T the third at the cubical bone.

U U The tendons of the long extenſors of the toes.

V V The tendons of the third peronei inſerted into the metatarſal bones of the little toes.

W W The ſhort extenſors of the toes.

Below at X is the maſs or head which joins the long flexor of the toes in the ſole of the foot.

Y Y The ſhort flexors of the toes. The four tendons of the left are viſible.

In the Feet.

Z. Z *a b c* The ſhort flexors of the little toes, ariſing from the metatarſal bones of thoſe toes. *a* the part connected to the metatarſal bone of the little toe. *b c* the part belonging to the firſt bone of that toe, *c* the tendinous end.

d d The tendons of the ſhort flexors of the toes, together with the tendons of the long flexors belonging to the little toes.

e e The tendon of the long flexor of the great toe, paſſing betwixt the ſeſamoide bone.

In the Shoulders and Arms.

f The great ſerratus muſcle.

g g The corachyoidei.

b The ſubclavian muſcle.

i k. i k l The ſupraſpinati. *k* the origin from the ſcapula. *l* the tendinous end inſerted into the larger unequal protuberance of the upper head of the humerus.

m n o p q r ſ s v. m n o p q r ſ s v The infraſpinati. *n o* the origin from the baſis of the ſcapula, *o p* the origin from the ſpine. *q* the tendon where it begins firſt to appear. *r ſ* the fleſhy portions joining to that tendon. *r* the upper portion from the ſpine; *ſ* the lower portion from the lower angle. *s* the tendinous end, inſerted into the larger unequal protuberance *v* of the upper head of the humerus.

t u w x. t u w x The leſs teretes. *u* the tendon inſerted into the os humeri. *w x* The fleſhy portions with the tendon inſerted partly above *w*, and in part below *x*. The inſertion is into the larger unequal protuberance of the upper head and lower part of the neck of the humerus.

y y. y y The larger teretes.

z A B B C D E F G H I K L L M N N. *z* A B B C D E F G H I K L L M N N The tricipital extending muſcles of the arms. *z* A B B the brevis, in the upper part of which is a ſinus impreſſed by the deltoides: (ſee Tab. V.) A the tendinous part, B B the origin from the humerus, C D the long extenſor in the upper part of which is a ſinus impreſſed by the deltoides (ſee Tab. V.) D the tendinous part, E the external brachialis. F the common tendon of theſe three heads. G the tendinous part formed by the long extenſor and joining the common tendon. H the tendinous part formed by the external brachialis which joins the common tendon. I the tendinous part which ariſing from the ſurface of the external brachialis, belongs to the great condyle of the humerus. K the common tendon inſerted into the elbow. L L the thinner horn of this tendon here cut off, which is inſerted into the fore part of the olecranum and ſpine of the ulna next adjacent. M N N part of the external brachialis from the root of the leſſer condyle N N, and ariſing from the margin of the os humeri above it.

O O The bicipital muſcles of the arms.

P P The internal brachial muſcles.

Q R S T T U The longer external brachialis. R the origin from the leſſer condyle and from the margin of the humerus above it. S the part where it was conjoined with the common extenſor of the fingers and internal ulnaris. T T U the tendon inſerted into the metacarpal bone of the index.

V. V W W X The ſhorter external radiales. W W the tendon inſerted into the metarcarpal bone X of the index and little finger.

Y Z *C C* The anconei. Z the tendon ariſing from the leſſer condyle of the humerus. *C C* the extremity inſerted into the fore part of the elbow and margin of the ulna below that part of the elbow.

D. D H The ſhort ſupinators. *H* the tendinous beginning ariſing from the leſs condyle of the humerus.

L. L X P S W W The long abductors of the thumbs. *X* part of its origin. *P* the part from the radius. *S* the tendon of its upper part. *W W* the tendon of its lower part.

Y. Y O The leſs extenſors of the thumbs. *O* the tendon.

a b. a b c The larger extenſors of the thumbs. b the origin from the ulna. c the tendon.

d e The common end in which unite the tendons of the greater c and leſs extenſor *O* of the thumb, inſerted into the third bone of the thumb e.

f g. f g h The indicators. g the origin from the ulna. h the tendon.

i k k. i k k The profundi. k k the origin from the ulna.

l m n o p q. l m n o p q The internal ulnares. m the beginning ariſing from the greater condyle of the humerus, and cohering with the common tendinous head of the muſcles which ariſe from that condyle. n the beginning from the broad part of the elbow n o p; and departing from the tendinous faſcia or covering of the cubit n o, and ariſing alſo from the ulna p, the tendon q is inſerted into the piſiform bone of the wriſt.

r The ſquare pronator muſcle.

In the Left Hand.

s. s t u v w x y z *a* The ſublime flexors. t the portion belonging to the middle finger; u that to the index, v that to the ring finger. w that to the little finger. x y z *a* the tendons. x that of the index. y that of the middle finger. z of the ring finger. *a* of the little finger.

b c d e. The lumbrical muſcles of the fingers, *b* that of the index, *c* that of the middle finger, *d* that of the ring finger, *e* that of the little finger.

f g The ſmall flexor of the little finger. *g* the origin from the interior ligament of the carpus.

h i k The abductor of the little finger. *i k* the origin, from the piſiform bone of the wriſt *i*, and from the inner ligament of the wriſt *k*.

l The tendon common to the ſmall flexor and abductor of the little finger, conjoined to the tendon of the extenſor of that finger.

m The end of the extenſor tendon of the little finger, belonging to the ſecond bone.

n The tendon running to the third bone, formed of the tendon *l* and joined by a portion of the extenſor tendon of the little finger.

o o The ſame tendons which in the right hand are marked *v x y.* t x y.

p. p The tendons of the profundi.

q The ligament which with the cavity in the wriſt forms a canal, wherein are confined the tendons of the ſublimis, profundus, and long flexor of the thumb, paſſing from the fore-arm to the hand.

r ſ s The oponent muſcle of the thumb. *ſ* its origin from the inner ligament of the wriſt. *s* its end inſerted into the metacarpal bone of the thumb.

t u w Part of the ſhort flexor of the thumb, which may reckoned as a ſecond ſhort abductor of the thumb. *u* its origin from the inner ligament of the carpus. *w* its tendinous end inſerted into the firſt bone of the thumb.

x y The poſterior tail of the ſhort flexor of the thumb, inſerted into the firſt internode *y*, and poſterior ſeſamoide bone of the thumb.

z The adductor muſcle of the thumb.

C D The tendon of the long flexor of the thumb, in a manner ſplit or divided. *D* its inſertion into the laſt bone of the thumb.

In the Right Hand.

a b c d The tendons of the extenſors of the fingers as they paſs over the joints, conjoined with the tendons and aponeuroſes of the interoſſei, lumbrical, &c. muſcles. They are cut off at the roots of the fingers, except in the index, in which that tendon only is cut off which it receives from the common extenſor. *e e e e* the ends of thoſe tendons inſerted into the ſecond order of bones.

f g The abductor of the little finger. *g* the tendon.

h The tendon common to the abductor and ſmall flexor of the little finger joined with the tendon *a*, and being increaſed by a portion received from thence, runs to the third bone *i* of the little finger.

k The aponeuroſis, from the capſule of the joint of this finger with its metacarpal bone, belonging to the tendon *a*.

l The tendon of the interoſſeus of the little finger, to which is conjoined the tendon of the fourth lumbricalis.

m The tendon common to the interoſſeus of the little finger and fourth lumbricalis, conjoined with the tendon *a*, and being increaſed by a portion received from thence, runs to the third bone *n*.

o The common tendinous end *i n*, belonging to the third bone.

p The aponeuroſis which joins the tendon *a*, coming in its upper part from the capſule of the joint of this finger with its metacarpus: and below it is produced by the tendon *l* of the interoſſeus of the little finger, with which tendon is conjoined the tendon of the fourth lumbricalis.

q r ſ The inner interoſſeus of the ring finger. q one head of it ariſing from the metacarpal bone of the little finger. r the other head from the bone of the ring finger. ſ the tendon which afterwards joins itſelf at s with the tendon *b*, and being increaſed by a portion received from thence, runs to the third bone *v*.

t The aponeuroſis which joins the tendon *b*, coming in its upper part from the capſule of the joint of this finger with its metacarpus; and below it is produced from the tendon of the inner interoſſeus *b*, of the ring finger *ſ*.

u The tendon of the outer interoſſeus muſcle of the ring finger, to which is conjoined the tendon of the third lumbricalis.

w The tendon common to the outer interoſſeus of the ring finger and third lumbricalis, conjoined with the tendon *b*, and being increaſed by a portion received from thence, runs to the third bone *x*.

y The common end of the tendons *v*. *x*, belonging to the third bone.

z The aponeuroſis which joins the tendon *b*, coming in its upper part from the capſule of the joint of this finger with its metacarpus: below produced from the tendon *u* of the outer interoſſeus of the ring finger, with which tendon is conjoined the tendon of the third lumbricalis.

a b c The inner interoſſeus of the middle finger. a one head ariſing from the metacarpal bone of the ring finger: b the other head from that of the middle finger. c the tendon which afterwards joins at f with the tendon *c*, and being increaſed by a portion received from thence, it runs to the third bone g.

h The aponeuroſis that joins the tendon *c*, coming in its upper part from the capſule of the joint of this middle finger with the metacarpus: in its lower part produced from the tendon c of the inner interoſſeus of this middle finger.

i i k k l The outer interoſſeus of the middle finger. i i one head ariſing from the metacarpal bone of the middle finger; k k the other head from the bone of the index. l the tendon to which is joined the tendon of the ſecond lumbricalis,

m The tendon common to the outer interoſſeus of the middle finger and ſecond lumbricalis, conjoined with the tendon *c*, and being increaſed by a portion received from thence, it runs to the third bone n.

o The common end of the tendon, g n belonging to the third bone.

p The aponeuroſis which joins the tendon *c*, coming in its upper part from the capſule of the joint of this finger with the metacarpus: in its lower part produced by the tendon l of the outer interoſſeus of this middle finger, with which tendon is conjoined the tendon of the ſecond lumbricalis.

q r The inner interoſſeus of the index. r the tendon which afterwards joins at s with the tendon *d*, and being increaſed by a portion received from thence, it runs to the third bone t.

u The aponeuroſis that joins the tendon *d*, coming in its upper part from the capſule of the joint of this finger with the metacarpus: below it is produced from the tendon r of the inner interoſſeus of this fore finger.

v The tendon of the firſt lumbricalis, which afterwards joins at w with the tendon *d*, and being increaſed by a portion received from thence, it runs to the third bone x.

y The common end in which meet the tendons t x belonging to the third bone.

z 1 The aponeuroſis that joins the tendon *d*, produced in its upper part z from the abductor of the index: in its lower part from the firſt lumbricalis 1.

2 The outer interoſſeous muſcle of the index.

3 The abductor of the index.

4 5 The aponeuroſis which joins the common end of the extenſor d of the thumb. Part of it 4 ſurrounds the capſule of the joint of this finger with its metacarpus, and adheres to the ſaid capſule: the part 5 comes from the inner tail of the ſhort flexor of the thumb.

6 The inner tail of the ſhort flexor of the thumb.

7 8 The adductor of the thumb: 8 its tendinous end inſerted into the firſt bone of the thumb.

THE

Seventh Anatomical Table

OF THE

HUMAN MUSCLES

EXPLAINED.

HERE follows the third order of the muſcles on the back part of the body, with ſome of the ligaments and naked parts of the Skeleton; for here we have removed moſt of the outer parts exhibited in the figure laſt preceding. This figure correſponds to that of the third table, and gives a back view thereof, with this difference, that, in the firſt place, the outer ſphincter of the anus is here taken away, as being ſufficiently repreſented before in the ſixth table; and, ſecondly, that in the right hand of this figure, contrary to that of the third table, are repreſented the tendon of the abductor of the little finger, and the tendon common to that abductor with the ſmall flexor; and this was done to avoid leſſening the tendinous communication ſtretched over the back of the little finger.

The muſcles here taken off are, from the head, the temporalis, the maſſeter, the digaſtric of the lower jaw. From the neck, back, and loins, the ſplenii of the head and neck, the elevators of the ſcapulæ, the greater and leſs rhomboidals, the poſterior and upper ſerrati, the great ſerrati, the lower poſterior ſerrati, and the internal obliqui of the abdomen, together with the broad tendons by which the latiſſimi dorſi begin. From the parts about the nates and hips are taken the middle glutei, the pyriformes the upper and lower gemelli, the quadrati of the thighs, coccygei, the elevators of the anus, the tranſverſales of the perinæum both primary and ſecondary, with the outer ſphincter of the anus, and the teſticles. From the thigh the ſemitendinoſi, the longer heads of the bicipitals of the legs, with the external and internal vaſti. From the legs are taken the plantares and the ſolei, with the tendons of Achilles. From the feet the tendons of the common extenſors of the toes and third peronei, the ſhort flexors of the intermediate and little toes. From the ſhoulder blades the coracohyoidei, ſubclavius, ſupraſpinati, infraſpinati, and leſs teretes. From the arms are taken the bicipital flexors, with the long and ſhort extenſors of the elbow. From the fore-arms and hands, the anconei, the long abductors of the thumbs with their greater and leſs extenſors, the indicators, the outer ulnares and ſublimus. From the left hand the abductor and ſhort flexor of the little finger, part of the ſhort flexor of the thumb (which may be reckoned as a ſecond ſhort abductor of it) and the oppoſer of the thumb. From the right hand the abductor of the little finger, the head of the inner interoſſeus of the ring finger, ariſing from the metacarpal bone of the little finger, the head of the inner interoſſeus of the middle finger ariſing from the metacarpal bone of the ring finger. The head of the outer interoſſeus of the middle finger ariſing from the metacarpal bone of the index, the abbuctor of the index, the aponeuroſis which inveſts the capſule of the joint of the thumb with its metacarpal bone, faſtened to the ſaid capſule, and conjoining itſelf to the common end of the tendons of the extenſors of the thumb.

In the Head, Neck, and Trunk.

a The buccinator muſcle.

b The portion that joins the orbicularis of the mouth, ariſing from the lower jaw.

c The internal pterygoideus inſerted into the lower jaw.

d e e Mylohyoideus. e e the origin from the lower jaw.

f g h i k l l m m n. f g h i k l l m m n The biventers of the neck. f the firſt belly. g the tendon betwixt the venters. h the portion ariſing from the uppermoſt vertebra of the ſpine, and detached partly to the middle tendon i, and in part to the ſecond belly k. l l the ſecond belly, inſerted into the occipital bone by the tendinous end m m. n the tendinous part of the ſecond belly.

o o, o o The ſpinal muſcles of the neck.

p q r s t The left interſpinals of the neck, cloſe to which lie the right. p that betwixt the ſpines of the firſt and ſecond vertebra of the neck: q between thoſe of the ſecond and third: r between thoſe of the third and fourth: s between thoſe of the fourth and fifth: t betwixt the ſpines of the fifth and ſixth.

u v. u v The complexi muſcles. v the tendinous part.

w w x The upper oblique muſcle of the head. x the parts inſerted into the occipital bone.

y. y The lower oblique muſcles of the head.

z A B. z A B The trachelomaſtoidei. A the tendinous part. B the tendinous end, inſerted into the maſtoide proceſs.

Tab. VII.

A. Bell Sculp.

TAB. VII.

A. Bell Sculp.t

C C. C C The tranſverſales of the neck.
D D The cervicales deſcendentes.
E E The middle ſcaleni.
F G H. F G H The poſterior ſcaleni. F its origin from the ſecond rib. G the tail belonging to the tranſverſe proceſs of the third vertebra of the neck, H to the ſecond.
I K L M: I K L M The elevators of the ribs. I of the ſecond. K of the third. L of the fourth. M of the fifth.
N O P Q R R S S T U V W: N O P Q R S S T U V W The outer intercoſtal muſcles. N the ſecond. O the third, &c.
X X The twelfth of the inner intercoſtal muſcles.
Y Z *a b* Y Z *a b* The tranſverſe muſcles of the abdomen. Y the fleſhy part, Z the broad tendon by which it ariſes, and adheres to the bottom of the edge of the lowermoſt or twelfth rib, as well the bony part *a*, as cartilage *b*, even to its tip.
c c. c c The inner plates of the common aponeuroſes of the lower poſterior ſerrati, and inner obliqui muſcles of the abdomen; they are here cut off where they no longer adhere to the broad tendons by which the tranſverſe muſcles of the abdomen begin.
d e f g h i k k l m n o p q r ſ s v t u w x y z C D H L X P S W Y O. d e f g h i k k l m n o p q r ſ s v t u w x y z C D H L X P S W Y O The ſacrolumbales with the longiſſimi muſcles of the back. *a e f g h i k k l m* the common head by which they begin. *d* the tendinous part, *e* the fleſhy part. *f g h* the origin of that head from the ſpine or edge of the os ilium, *f* the fleſhy part, *g h* the tendinous part. *h i* the part where it adheres to the gluteus magnus. *i k* the tendinous part ariſing from the two upper tubercles near the opening of the end of the canal of the os ſacrum. *k k* the tendinous part diſcontinued one from the other, compoſed of the tendons ariſing from the ſpines of the two lower lumbal vertebræ and all thoſe of the os ſacrum. *l* the tendon ariſing from the ſpine of the third lumbal vertebra. *m* the diviſion of this common head into the ſacrolumbalis and longiſſimus dorſi muſcles.
n o p q r ſ s v t u w x y z C D H L X P n o p q r ſ s v t u w x y z C D H L X P The ſacrolumbales. *r s*, &c. the tails belonging to the ribs: *n o* that to the eleventh rib, *p q* to the tenth, *r ſ* to the ninth, *s v* to the eighth, *t u* to the ſeventh, *w x* to the ſixth, *y z* to the fifth, *C D* to the fourth, *H L* to the third, *X* to the ſecond, *P* to the firſt: *n p r s t w y C H* the fleſhy parts of thoſe tails. *o q ſ v u x z D L X P* the tendinous parts.
S W Y O. S W Y O The longiſſimi dorſi. *W* the tendinous part of the common head running thro' the longiſſimus. *Y* the tail aſcending thro' the neck, where it gives a tendinous portion *O* to the trachelomaſtoideus, and at laſt joins itſelf to the deſcending cervicalis.

In the Trunk.

a b c d e g h. a b c d e g h The ſemiſpinales of the back. b the head ariſing from the tranſverſe proceſs of the ſixth vertebra of the back, counting from the loins. c the tendinous end which is inſerted into the ſpine of the ſecond vertebra of the neck from the back; d that to the firſt of the neck; e that to the uppermoſt of the back; g to the eleventh of the back; h to the tenth.
i k l m n p q r s t u v w. i k l m n p q r s t u v w The ſpinales of the back. k the head ariſing tendinous from the ſpine of the third vertebra of the back, counting from the loins; l the head from that of the ſecond; m from that of the firſt; n from that of the fifth vertebra of the loins; p from that of the fourth. q the extremity inſerted (by the tendon which it forms) into the ſpine of the fifth vertebra of the back; r the end to the ſixth; s to the ſeventh; t to the eighth; u to the ninth; v to the tenth w to the eleventh.
Betwixt the heads of the ſpinales dorſi, near the ſpines, and betwixt the parts of the longiſſimi dorſi *l k* appear the multifidi ſpinæ.
Betwixt the ſpines of the three lower vertebræ of the back appear the interſpinales of the back.
Betwixt the ſpine of the loweſt vertebra of the back and uppermoſt of the loins, appear the interſpinales lumborum, as alſo they appear betwixt the ſpines of the lumbal vertebræ, and between the lower lumbal ſpine and uppermoſt of the os ſacrum. The ſpaces are ſo minute that letters could not be fixed on them; but Tab. VIII. will give a better knowledge of them.
x x The multifidi of the ſpine.
y y The great pſoæ or lumbal muſcles of the thighs.
z *C C C D*. z *C C C D* The leaſt glutei. *C C C* the origin from the back of the os ilium. *D* the tendinous part by which the tendinous end begins from the outer part of the fleſh.
H L L L X P. H L L L X P The internal obturators. *H* the part ſeated in the pelvis, and there ariſing from the margin of the great foramen *L L L* of the os innominatum. *X P* the part which goes over the back of the iſchium to the femur. *P* the tendon which it forms.
S S W. S S W The external obturators. *W* the tendinous end.
Y Y The internal iliacs, by their inſertions.
O. O The tendons common to the great lumbal or pſoæ muſcles and internal iliacs, inſerted into the leſs trochanters.
A B C D E F G. A B C D E F G The ſemimembranoſi. A the tendon by which it begins and ariſes at B from the back of the tubercle of the iſchium. C the fleſhy belly. D the origin of the tendinous tail from the fleſh. E the principal part of the ſaid tail belonging to the upper head of the tibia: F the poſterior aponeuroſis which this muſcle inſerts below the root of the upper head of the tibia: G the anterior aponeuroſis which it inſerts into the inner margin of the tibia. In its head and belly is a ſinus impreſſed by the ſemitendinotus. See Tab. VI.
H I. H I The graciles. I the tendon
K L M N O O. K L M N O O The large adductors of the thighs, in which are impreſſed the marks of the large glutei: See Tab. V. L the part ariſing from the os pubis. M its origin from the tubercle of the iſchium, externally tendinous. N O O the upper end inſerted into the femur O O.
P Q R S. P Q R S The ſhorter heads of the biceps muſcles of the legs. Q part of the tendon cut off which ariſes from the longer head. R part of the tendon which is increaſed by the acceſſion of the fleſh of the ſhorter head. S the tendinous end inſerted into the upper head of the fibula.
T T The outer heads of the gemelli of the legs. U U the inner, cut off.
V V The plantares muſcles cut off.
W X Y. W X Y The poplitei. X the tendon by which it begins. Y a tendinous part.
Z a b c d e. Z a b c d e The tibiales poſtici. a the part which ariſes from the tibia, b the part from the fibula, c d the tendinous ſurface. e the tendon.
f g. f g The long flexors of the toes. g the tendon.
h i k. h i k l l The long flexors of the great toes. i the origin from the tibia: k the tendon. l l its courſe under the bottom of the foot and toe.
m n o o p q r s t. m n o o p q r s t The long peronei. n one of its origins from the head of the fibula. o o the other from the ſpine of the fibula.
p q r s t The tendon, ariſing from the fleſh at p: r s t the knots or turnings of the tendon, r the firſt by which it bends at the outer ancle; s the ſecond, at the protuberance in the outer ſide of the calcaneum; t the third at the cubiform bone.
u v w x. u v w x The ſhort peronei. v part of the tendon ariſing from the fleſh: w the tendon, inſerted at x into the metatarſal bone of the little toe.
y z a b. y z a b The ſhort extenſors of the toes. *z* the tail belonging to the third of the ſmall toes, *a* that to the ſecond, *b* that to the firſt.
c c: c c The tendons ſtretched over the backs of thoſe toes.
d d The heads which join the long flexors of the toes in the ſoles of the feet.
e e The interoſſei muſcles of the little toes.
f The tendons of the long flexors of the toes, joined with the lumbricales as they paſs along.
g The tail of the ſhort flexor of the great toe, which belongs to the ſeſamoide bone next the firſt of the ſmall toes.
h h The tendons of the long flexors to the ſmall toes.

In the Shoulders, upper Extremities, and left Hand.

i i The ſubſcapular muſcles.
k l m. k l m The larger teretes. *l* the origin from the angle of the ſcapula. *m* the tendinous part.
n. n The coracobrachiales.
o p p p q r ſ. o p p p q r ſ The external brachiales; in which are impreſſed the marks of the long and ſhort extenſor of the elbow; ſee Tab. V. *p p p* its origin from the humerus, and from the root of the anterior condyle *q. r* the tendinous part. *ſ* a tendinous part ariſing from the ſurface of the outer brachialis, and belonging to the greater condyle of the humerus.
s The fleſhy part of the extenſor longus cut off. *v* part of the brevis cut off, which is outwardly tendinous, inwardly fleſhy. *t* the place from whence is cut off part of the common tendon of the three heads of the triceps brachialis, *u w x y* the common tendon of the triceps brachialis, inſerted into the elbow or head of the ulna at *w*. *x* the tendinous part from the longus to the common tendon: *y* the tendinous part formed by the brachialis externus, which joins the common tendon.
z A. *z* A The brachialis internus, wherein is a ſinus impreſſed by the ſupinator longus: ſee Tab. VI. A the origin of the outer horn from the os humeri.
B C C D. B C C D E F The longer of the external radiales. C C its origin from the anterior edge and condyle of the os humeri, D the part where it is conjoined and has a common origin with the common extenſor of the fingers and outer ulnaris. E the tendon inſerted at F into the metacarpal bone of the index.
G. G H I The ſhorter external radiales, having a ſinus impreſſed by the common extenſors of the fingers: See Tab VI. H the tendon inſerted at I into the metacarpal bones of the index and middle finger.
K L M N N K L M N N The ſhort ſupinators. L M part of the tendinous origin from the anterior condyle of the humerus at L, and connected at M with the capſule of the joint of the elbow. N N part of the origin from a protuberance of the ulna, outwardly tendinous.
O O The long flexors of the thumbs.
P P The ſquare pronators.
Q R S S. R S S T T U U U V V W W The profundi flexors. S S the origin from the ulna. T T the tendon belonging to the little finger, U U U the tendon to the ring finger, V V that to the middle finger, W W that to the index.
X X Y The tendon of the long flexor of the thumb, inſerted at Y into the laſt bone of the thumb.
Z *C D H* The ligament, which with the carpal ſinus forms a channel wherein are confined the tendons of the ſublimis and profundus from the fore-arm to the hand, with the long flexor of the thumb. *C* the origin of this ligament from the piſiform bone, from the unciform proceſs of the cuneiform bone *D*, and from the larger multangular bone *H*.
L The ligament that goes from the piſiform bone to the fourth bone of the metacarpus.
X P S The adductor of the metacarpal bone of the little finger, ariſing at *P* from the carpal ligament, and inſerted at *S* into the fourth metacarpal bone.
W Y The ſhort flexor of the thumb. *W* one tail inſerted tendinous into the ſeſamoide bone of the thumb which is fartheſt from the index. *Y* the other tendinous end inſerted into the firſt internode and ſeſamoide bone of the thumb neareſt the index.
O The adductor of the thumb.
1 2 3 4 The lumbrical muſcles of the fingers; 1 that of the index, 2 that of the middle finger, 3 that of the ring finger, 4 that of the little finger.
5 The tendon of the extenſors of the little finger, belonging to the firſt bone of that finger at 6
7 The tendon common to the ſmall flexor and abductor of the little finger, joined to the tendon of the extenſor of that finger.
8 The tendon running to the third bone of the little finger, formed of the tendon 7, joined by a portion of the extenſor tendon of this finger.
9 10 The ſame tendons which in the right hand are marked w *b c. t y z*.

In the right Hand.

a The adductor of the fourth metacarpal bone.
b c d e The extenſor tendons of the fingers cut off at their roots, paſſing over their backs, and conjoined with the tendons and aponeuroſes of the interoſſei, lumbrical, &c. muſcles. f f f f the ends of thoſe tendons inſerted into the bones of the ſecond order.
g The part whence the abductor of the little finger is cut off. h its tendon.
i The common tendon of the abductor and ſmall flexor of the little finger joined with the tendon b, and being increaſed by a portion received from thence, runs to the third bone of the little finger, k
l The aponeuroſis which ariſing from the capſule of the joint of this finger with its metacarpal bone, belongs to the tendon b.

m n The interoſſeus of the little finger, ariſing from the metacarpal bone at m. n its tendon joined with the tendon of the fourth lumbricalis

o The tendon common to the interoſſeus of the little finger and fourth lumbricalis, conjoined with the tendon b, and being increaſed by a portion received from thence, it runs to the third bone of the little finger.

q The common end of the tendons k p, belonging to the third bone of the little finger.

r The aponeuroſis which joins the tendon b, coming in its upper part from the capſule of the joint of this finger with the metacarpus: below produced by the tendon n of the interoſſeus of the little finger, with which tendon is conjoined the tendon of the fourth lumbricalis

s The head of the inner interoſſeus of the ring finger ariſing from the metacarpal bone of that finger. t the end of the other head cut off, ariſing from the metacarpal bone of the little finger. u the tendon that at v joins the tendon c, and being increaſed by a portion received from thence, runs to the third bone of the ring finger w.

x The aponeuroſis that joins the tendon c, coming in its upper part from the capſule of the joint of this finger with the metacarpus: below produced from the tendon u of the inner interoſſeus of the ring finger.

y z The outer interoſſeus of the ring finger, ariſing at y from the metacarpal bone of that finger. z its tendon, which joins the tendon of the third lumbricalis.

a The tendon common to the outer interoſſeus of the ring finger and third lumbricalis, joined with the tendon c, and being increaſed by a portion received from thence, runs to the third bone of the ring finger *b*.

c The common end of the tendons w *b*, belonging to the third bone of the ring finger.

d The aponeuroſis that joins the tendon c, coming in its upper part from the capſule of the joint of this finger with the metacarpus: below produced from the tendon z of the outer interoſſeus of the ring finger, with which tendon joins the tendon of the third lumbricalis.

e The head of the inner interoſſeus of the middle finger ariſing from the metacarpal bone of that finger. *f* the end of its other head cut off, which ariſes from the metacarpal bone of the ring finger. *g* the tendon which ſoon after joins at *h* with the tendon d, and being increaſed by a portion received from thence, runs to the third bone of the middle finger *i*.

k The aponeuroſis that joins the tendon d, coming in its upper part from the capſule of the joint of this finger with its metacarpus: below produced from the tendon *g* of the inner interoſſeus of this middle finger.

l The head of the outer interoſſeus of the middle finger ariſing from the metacarpal bone of that finger. *m* the end of its other head cut off, that ariſes from the metacarpal bone of the index. *n* the tendon that joins itſelf with the tendon of the ſecond lumbricalis.

o The tendon common to the outer interoſſeus of the middle finger and ſecond lumbricalis, which, after joining the tendon d, is increaſed by a portion received from thence, and runs to the third bone of the middle finger *p*.

q The common end of the tendons *i p*, belonging to the third bone of the middle finger.

r The aponeuroſis that joins the tendon d, coming in its upper part from the capſule of the joint of this middle finger with its metacarpus: below produced from the tendon *n* of the outer interoſſeus of this middle finger, with which tendon is conjoined the tendon of the ſecond lumbricalis.

f s The inner interoſſeus of the index, ariſing at *f* from the metacarpal bone of the index. *s* with the tendon e, and being increaſed by a portion received from thence, runs to the third bone of the index *t*.

u The aponeuroſis that joins the tendon e, coming in its upper part from the capſule of the joint of this fore-finger with the metacarpus: in its lower part produced by the tendon *f* of the inner interoſſeus of this fore-finger.

w The tendon of the firſt lumbricalis which at *x* joins with the tendon e, and being increaſed by a portion received from thence, runs to the third bone of the index *y*.

z The common end in which unite the tendons *t y*, belonging to the third bone of the index.

1 The aponeuroſis which being produced from the firſt lumbricalis, joins with a like aponeuroſis from the abductor of the index, and therewith joins the tendon e.

2 3 The outer interoſſeus of the index, ariſing at 2 from the metacarpal bone of the index. 3 the tendinous end inſerted into the firſt bone of the index.

4 5 The ſhort flexor of the thumb. 5 the aponeuroſis which it ſends out and joins with the aponeuroſis inveſting the capſule of the joint of the thumb with the metacarpus, and therewith joins the common end of the extenſor tendons of the thumb,

6 7 The adductor of the thumb, 7 the tendinous end inſerted into its firſt bone.

THE

Eighth Anatomical Table

OF THE

HUMAN MUSCLES

EXPLAINED.

THIS is the fourth or laſt order of the muſcles on the back part of the body, with the Skeleton laid more naked; becauſe moſt of the outer muſcles, in the preceding figure, are here removed. This figure is a back view of that contained in the fourth table, but not wholly ſo; ſince neither the internal pterygoidei, external ſphincter of the anus, tranſverſales of the perinæum, nor interoſſei and tendons of the fingers in the right hand, are any of them repreſented here as in that figure: but we have repreſented the interoſſei, with the tendons in the left hand; ſince we expreſſed them in the third table, but omitted them in the fourth.

We have here taken away, from the head, that part of the buccinator which joins the orbicularis of the mouth, the internal pterygoideus, and mylohyoideus. From the neck, the cervical biventers, the deſcending cervicales, the poſterior ſcaleni; and from the left ſide, the ſpinalis of the neck. From the back and loins, the ſacrolumbales, with the longiſſimi dorſi and ſpinales dorſi: and from the left ſide of the ſpine, the ſemiſpinales dorſi; from the left ſide of the thorax, the ſhorter elevators of the ribs, except the firſt; the long elevators and outer intercoſtals. From the ſides, betwixt the thorax and hips are taken the tranſverſales of the abdomen, together with the inner plates of the aponeuroſes, common to the poſterior and lower ſerrati, with the internal obliqui of the abdomen. From the hips and nates the leſs glutei and internal obturators. From the thighs the graciles, ſemimembranoſi, bicipitals of the legs, origins of the gemelli and plantares. From the legs and feet, the poplitei, the long peronei, the long flexors of the great toes, and the long flexors of the ſmall toes. From the feet the ſhort extenſors of the toes, the fleſhy heads that join the long flexors of the toes in the ſoles of the feet, the interoſſei of the little toes, the tendons of the long flexors of the toes, with the lumbricales. From the ſhoulder-blades and arms, the larger teretes, the coracobrachiales, the internal brachiei, and the tricipital extenſors of the arms. From the fore-arms and hands, the longer and ſhorter external radiales, the profundi flexors, and the long flexors of the thumbs. Alſo from the left hand are removed the inner circular ligament, the ligament from the piſiform bone of the wriſt to the fourth metacarpal bone. The adductor of the fourth metacarpal bone of the hand, the lumbricales, the tendon of the extenſors of the little finger, with the tendon common to the ſmall flexor and abductor of the little finger, joined to its extenſor tendon; the tendon common to the firſt lumbricalis and extenſors of the index, belonging to the third bone of the index. From the right hand are taken all the muſcles, tendons, and aponeuroſes, except the adductor and ſhort flexor of the thumb.

TAB. VIII.

A. Bell Sculp.

TAB. VIII.

A. Bell Sculpt.

In the Head and Neck.

a b c c a b c c The leſs poſterior recti muſcles of the head. b the origin from the protuberance of the atlas which is inſtead of a ſpinal proceſs, from which origin it is outwardly tendinous. c c the end inſerted into the occipital bone.

d e f. d e f The larger poſterior recti muſcles of the head. e the origin from the ſpine of the epiſtrophæus. f the end inſerted into the occipital bone.

g. g h i i The upper obliqui of the head. h the origin from the tranſverſe proceſs of the epiſtrophæus. i i the end inſerted into the occipital bone near the appendix of the lambdoidal future.

k l m k l m The lower obliqui of the head. l the origin from the ſp ineof the epiſtrophæus. m its extremity inſerted into the tranſverſe proceſs of the atlas.

n n The fifth interſpinals of the neck. o o the fourth. p p the third. q q. the ſecond. r r the firſt.

s t u v w x y z *a b c.* s t u v w x y z *a b c* The middle ſcaleni. t the origin from the firſt rib. u the head that joins it from the tranſverſe proceſs of the firſt vertebra of the neck, v that from the ſecond w x y z *a b c* the extremities inſerted into the tranſverſe proceſſes of the vertebræ of the neck, viz. w of the firſt, x of the ſecond, y of the third, z of the fourth. *a* of the fifth. *b* of the ſixth. *c* of the ſeventh.

d The poſterior intertranſverſales of the neck, the ſixth in order. *e* the fifth, which is alſo expreſſed on the left ſide. *f f* the fourth. *g* the third, which is alſo in the right ſide. *h h* the ſecond. *i* the firſt, which is alſo in the right ſide.

In the Back.

k k, &c. The ſhorter elevators of the ribs, *k k* thoſe of the firſt ribs, *l* of the ſecond, *m* of the third, *n* of the fourth, *o* of the fifth, *p* of the ſixth, *q* of the ſeventh, *r* of the eighth, *ſ* of the ninth, *s* of the tenth, *t* of the eleventh, *u* of the twelfth. *w* the tendinous beginning of the twelfth. *x* the tendinous part of the inſertion, which is alſo repreſented in the eleventh, tenth, and ninth. *y z z* the parts of the ſixth ſhort elevator, *y* its origin from the tranſverſe proceſs of the eighth vertebra of the back, *z z* its end inſerted into the rib: from whence alſo the origin and inſertion of the reſt of theſe muſcles may be underſtood. Theſe muſcles are taken off from the left ſide, except the firſt of them.

A B C D E The longer elevator of the tenth rib: B its origin from the tranſverſe proceſs of the eighth vertebra of the back; C part of its origin which is outwardly tendinous: D the extremity inſerted into the tenth rib, of which E denotes the tendinous part. This explanation belongs alſo to thoſe longer elevators which follow. F the longer elevator of the tenth rib; G that of the twelfth rib. Thoſe of the left ſide are removed.

H I K, &c. The outer intercoſtals, H the firſt, I the ſecond, K the third, L the fourth, M the fifth, N the ſixth, O the ſeventh, P the eighth, Q the ninth, R the tenth, S the eleventh. Thoſe of the left ſide are taken off.

T U V W, &c. Denote the internal intercoſtals, T the firſt, U the ſecond, V the third, W the fourth, X the fifth, Y the ſixth, Z the ſeventh, a the eighth, æ æ the ninth. b the tenth, c c the eleventh. d d the origin of the laſt from the rib next above; which holds true likewiſe in the firſt, ſecond, third, ſeventh, eighth, ninth, and tenth.

e e, &c. Denote the pleura uncovered.

f f g g, &c. The intertranſverſales of the back, f f the firſt (reckoning upwards), g g the ſecond, h h the third, i i the fourth, k k the fifth, l l the ſixth, m m the ſeventh, n n the eighth, o o the ninth.

p q r s t u v w x y z 1 The ſemiſpinalis of the back. q r s t four of the heads ariſing tendinous from the tranſverſe proceſs q, of the third vertebra of the back, counting from the loins, r that of the fourth, s of the fifth, t of the ſixth. u v w x y z 1 the ſeven tails turning into tendons, and belonging to the ſpine of the eighth vertebra of the back u, to the ninth v, to the tenth w, to the eleventh x, to the twelfth y, to the firſt of the neck z, to the ſecond 1. The left is taken off.

In the Back and Neck.

2 3 4 5 6 7 8 9 10 11 12 13 The ſpinalis muſcle of the neck. 3 4 5 6 7 8 the ſix heads by which it ariſes tendinous; 3 the origin from the tranſverſe proceſs of the ſeventh vertebra of the back, from the loins, 4 from that of the eighth, 5 of the ninth, 6 of the tenth, 7 of the eleventh, 8 of the twelfth. 9 10 11 12 13 the tails inſerted into the ſpinal proceſs of the ſecond vertebra of the neck 9, counting from the back, 10 to that of the third vertebra, 11 to the fourth, 12 to the fifth, 13 to the ſixth. The left ſpinalis muſcle of the neck is here taken away.

14 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62: 14 14 15 16 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 61 62 The multifidi muſcles of the ſpine. 15 the tendinous head which ariſes from the oblique deſcending proceſs of the fourth vertebra of the neck: 16 a like head from the third vertebra, 17 that from the ſecond: 18 that from the tranſverſe proceſs of the twelfth or uppermoſt vertebra of the back: 19 that from the eleventh: 20 that from the tenth: 21 from the ninth: 22 from the eighth: 23 from the ſeventh: 24 form the ſixth: 25 from the fifth: 26 from the fourth: 27 from the third: 28 from the ſecond: 29 the tendinous excurſion of the head which ariſes from the tranſverſe proceſs of the firſt vertebra of the back: 30 the like ariſing from the oblique aſcending proceſs of the fifth or uppermoſt vertebra of the loins: 31 that from the oblique aſcending proceſs of the fourth lumbal vertebra: 32 that from the oblique aſcending proceſs of the third lumbal vertebra: 33 that from the ſecond. 34 that from the firſt: 35 that from the firſt of the os ſacrum: 36 37 the head which ariſes partly from the ligament (36) coming from the protuberance, which the os ſacrum forms at the outer edge of its ſecond and third opening, and coninued down to the lower part of that bone; and partly from that protuberance itſelf 37: 38 the head which ariſes all the way from the third ſpine of the os ſacrum, to the tubercle of that bone, which is formed by the concretion of the oblique deſcending proceſs of its fourth vertebra, with the oblique aſcending proceſs of the fifth, and from that tubercle itſelf. 39 40 41, &c. the tendinous ends inſerted into the ſpines of the vertebræ; 39 that to the firſt or lowermoſt of the loins, 40 to that of the ſecond, 41 of the third, 42 of the fourth, 43 of the fifth, 44 of the firſt of the back, 45 of the ſecond, 46 of the third, 47 of the fourth, 48 of the fifth, 49 of the ſixth, 50 of the ſeventh, 51 of the eighth, 52 of the ninth, 53 of the tenth, 54 of the eleventh, 55 of the twelfth, 56 of the firſt of the neck, 57 of the ſecond, 58 of the third, 59 of the fourth, 60 of the fifth, 61 of the ſixth and 62 into the oblique deſcending proceſs of the ſaid ſixth vertebra of the neck.

C C D D The interſpinales muſcles of the back. *C C* the ſecond, *D D* the firſt.

H H L L X X P P S S W W The interſpinales of the loins. *H H* the ſixth, *L L* the fifth: *X X* the fourth, *P P* the third, *S S* the ſecond, *W W* the firſt.

In the Loins, Hips, and lower Extremities.

Y Y O O a a b b c c The intertranſverſales muſcles of the loins. *Y Y* the fifth, *O O* the fourth, *a a* the third, *b b* the ſecond, *c c* the firſt. The manner of their origin from the lower tranſverſe proceſs, and inſertion into the upper, is here apparent.

d e g h i k l. d e g h i k l The quadrati of the loins. *e* the origin from the ligament *f*, that is extended from the tranſverſe proceſs of the firſt lumbal vertebra to the os ilium. *g h i k* tendinous portions belonging to the tranſverſe proceſſes of the lumbal vertebræ, *g* to the ſecond, *h* to the third, *i* to the fourth, *k* to the fifth, *l* the extremity belonging the twelfth rib.

m Part of the diaphragm.

n n The great pſoæ, or lumbal muſcles of the thighs.

o p. o p The internal iliacal muſcles.

q q The tendons common to the great pſoæ and internal iliacs, inſerted into the leſs trochanters.

r r ſ t. r r ſ t The external obturators. *ſ* part of the origin from the inner margin of the great foramen or hole in the os innominatum. *t* the tendinous end.

v u w x y z A A A B C D. *v u w x y z* A A A B C D The great adductors of the thighs, in the upper part of which, near the inner ſide, are impreſſed the marks of the largeſt glutei, ſee Tab. V: and of the ſemitendinoſi, ſee Tab. VI. *u* all that part which is concave from the impreſſion of the ſemimembranoſus. *w x* the origin from the back of the tubercle of the iſchium by the tendinous part *w*, *x* the tendon which runs through the muſcular fleſh *y*. *z* the part that comes from the fore ſide of the pelvis, where it ariſes along the whole height of the os pubis. A A A the broad end inſerted into the thigh bone. B C D the lower end, which forming the tendon C, is inſerted into the inner condyle of the thigh bone at D.

E F G H H I I K L. E F G H H I I K L The tibiales poſtici. F the origin ſpringing from the tibia, G the origin from the fibula. H H its origination from the tibia, from whence it comes outwardly tendinous. I I the part that ariſes outwardly tendinous from the fibula. K L the tendon, ariſing from the fleſhy part at K, and paſſing behind the inner ancle at L.

M N O P Q R. M N O P Q R The ſhort peronei. N the origin from the fibula. O P Q R the tendon, ariſing from the fleſhy part at O, becoming thicker and broader at P, where it bends round the outer ancle, and at Q paſſes through the ſecond ligament near the upper part of the protuberance of the calcaneum; it is inſerted into the fifth metatarſal bone at R.

S S The heads of the ſecond interoſſei of the little toes, which ariſe from the metatarſal bone of thoſe toes.

T The head of the ſecond interoſſeus of the third toe, which ariſes from the metatarſal bones of that toe.

V The head of the ſecond interoſſeus of the ſecond toe, ariſing from the metatarſal bone of that toe.

W X The two tails of the ſhort flexor of the great toe, inſerted into the ſeſamoidal bones.

Y The ſecond interoſſeus of the fourth toe.

Z The tranſverſalis of the foot.

C The adductor of the great toe.

In the Shoulders, Arms, and Hands.

D D The ſubſcapulares.

H L X X P P. H L X X P P S The ſhort ſupinators. *L* the tendon ariſing from the leſs condyle. *X X P P* the part which is outwardly tendinous, ariſing from the capſule of the joint of the elbow at *X X*, and from the ulna at *P P*. *S* the end inſerted into the radius.

W W The ſquare pronators.

Y O a b c d e. *Y f* The ſhort flexors of the thumbs, *O* the origin from the inner protuberance of the larger multangular bone, and from the leſs multangular bone at a. b the anterior or outer tail, inſerted by the tendinous end c, into the ſeſamoidal bone of the thumb, which is fartheſt from the index. d the poſterior or inner tail, inſerted by the tendinous end e, into the ſeſamoidal bone of the thumb, which is neareſt the index, and likewiſe into the firſt bone of the thumb itſelf. f the aponeuroſis which goes from the poſterior tail, and joins itſelf to the common end of the tendons of the extenſors of the thumb.

g g h. g h The adductors of the thumbs. h The tendinous end inſerted into the firſt bone of the thumb.

i The poſterior or inner interoſſeus of the index.

Near k appear the outer interoſſeus of the middle finger.

l l The poſterior or inner interoſſeus of the middle finger.

m The outer interoſſeus of the ring finger.

n n The inner interoſſeus of the ring finger.

o The interoſſeus of the little finger.

p The tendon of the inner interoſſeus of the index, which being increaſed by a portion received from the tendon of the extenſor of the index, runs to the third bone of the index, joining in its common end with the tendon of the firſt lumbricalis, and is increaſed likewiſe by a portion from the extenſors of the index.

q The tendon common to the outer interoſſeus of the ring finger and third lumbricalis, which being increaſed by a portion received from the tendon of the common extenſor that belongs to this finger, runs to the third bone of this ſaid finger.

r The tendon of the inner interoſſeus of the ring finger, which being increaſed by a portion from the common extenſor to this finger, runs to the third bone of the ſaid ring finger, and joins the tendon q in the common extremity.

THE

Ninth Anatomical Table

OF THE

HUMAN MUSCLES

EXPLAINED.

AS in the firſt Table, ſo in this, we exhibit the primary or outermoſt order of the muſcles, after the common integuments and tendinous coverings have been removed: to theſe we have added ſome of the ligaments belonging to thoſe muſcles, and ſome parts of the third Skeleton, which makes the baſis of the preſent figure; with ſome other parts which are not covered with muſcles, as of the noſe, ear, and genitals.

In the Head, Neck, and Trunk.

a b c. a b c d e f The epicranius. a b the occipitalis. a its tendinous beginning. b the fleſhy part. c d the aponeuroſis betwixt the occipital and frontal muſcles; through which at d the temporal muſcle appears protuberant. e the membranous part by which the occipital muſcles and their aponeuroſes are joined to each other; ariſing above the origin of the cucullares from the occipital bone. f the frontalis.

g h The elevator of the outer ear. g the tendinous beginning, by which it goes off from the epicranius. h the fleſhy part.

i The anterior muſcle of the outer ear.

k l m The three retractive muſcles of the outer ear.

n The greater muſcle of the helix

o The leſs muſcle of the helix.

p Trajicus.

q Antitrajicus.

r s t t The orbicularis of the eye-lids. r the part which ſurrounds the edge of the orbit of the eye. s a part which comes from the corrugator of the eyebrows. t t the part which is ſpread over the eye-lids.

u The compreſſor of the noſe.

v The naſalis of the upper lip.

w x. w x The orbicularis of the mouth. x the part which is in the red margin of the lip.

y z The greater zygomaticus. z its origin from the os jugale.

a b The depreſſor of the corner of the mouth, *b* its origin from the lower jaw.

c The buccinator muſcle.

d e f g h The maſſeter. *d e* the anterior and outer part; *e* its origin from the os jugale, from whence outwardly it is for a good way tendinous. *f g h* the back part which is not covered by the former; *g h* its origin from the os jugale at *g*, and from the jugal proceſs of the temporal bone at *h*.

i k The internal pterygoideus inſerted into the mandible at *k*.

l The Stylochyoideus.

Betwixt *k* and *l* is the ſtylogloſſus. See Tab. X. Fig. 2. m.

Immediately below the ſtylogloſſus is the baſiogloſſus. See Tab. X. 1. k. and Fig. 2. o.

m n n o p q The latiſſimus colli or quadratus genæ. *n n*, &c. the muſcular portions which join it on the ſides of the neck in ſome people. *o* the diſperſed fibres by which it ends and diſappears in the upper part of the cheek. *p* the faſciculus or portion which is ſtretched through the fore part of the depreſſor of the angle of the mouth, towards the ſaid angle. *q* the lower jaw protuberant under the platyſmamyoides or ſquare muſcle of the neek and check.

r ſ The ſternomaſtoideus and cleidomaſtoideus joined together in one. *ſ* the tendinous end.

t The biventor of the neck, inſerted by its tendinous end into the occipital bone.

u The ſplenius of the head.

w The ſplenius of the neck.

x The middle ſcalenus.

y The elevator of the ſcapula.

z z C D. z C H L L X The cucullares. *C D* the tendinous origin. *C* part of it ariſing from the occipital bone. *H* the broadeſt part of its tendinous origin about the bottom of the neck and top of the back. *L L* the tendinous part of its end which is inſerted into the ſpine and upper proceſs of the ſcapula, and into the next adjacent part of the clavicle. *X* the tendinous part of its end, by which it is inſerted into the ſpine of the ſcapula not far from its baſis.

P S. P The infraſpinati. *S* the origin of the baſis of the ſcapula.

W Teres minor.

Y Teres major.

O. O A B C D E F The latiſſimi dorſi or broadeſt muſcles of the back. *O* the fleſhy part. A the broad tendon by which it begins. B its adheſion to the gluteus magnus. C its origin from the ſpine of the os ilium. D E F the heads which ariſe from the ribs: D that from the eleventh rib, E that from the tenth, F from the ninth.

G The upper ſerratus anticus.

H I The pectoralis. I the portion which joins it from the aponeuroſes of the external oblique muſcle of the abdomen.

K L M N O P Q R, &c. The lower or great ſerratus. K The head which ariſes from the third rib; L that from the fourth, M from the fifth, N from the ſixth, O from the ſeventh, P from the eighth. R R, &c. the origin of the heads themſelves from the ribs.

S T U V W X Y Z a a a a a b b b b b b c c d d d d e f f g h h h h i i i k The external obliquus of the abdomen. S the fleſhy part. T U V W X Y Z the ſerrated heads, of which T ariſes from the fifth rib, U from the ſixth, V from the ſeventh, W from the eighth, X from the ninth, Y from the tenth, Z from the eleventh. a, &c. the tendinous part of each head at the origin. b b, &c. origin of the heads themſelves from the ribs. c c the inſertion of the fleſhy part into the ſpine of the ilium. d d d d d e f f g h h h h i i i k the aponeuroſis or tendinous part, inſerted into the ſpine of the ilium at e, at f f the fleſh of the internal obliquus appears protuberant under it, under the ſame tendon, and that of the internal obliquus at g, the fleſh of the tranſverſalis appears protuberant; and at h h h h the fleſh of the rectus; at i i i appear the tendinous lines of the rectus through the ſaid aponeuroſes and at k, under the ſame appears the pyramidalis.

In the Left lower Extremity.

l The cremaſter muſcle of the teſticle.

m The long adductor of the thigh.

n The pectineus.

o The great pſoas or lumbal muſcal of the left thigh.

p The ſartorius.

q r s The extenſor of the tendinous covering of the thigh. r its origin from the ſpine of the ilium. s its extremity from whence the tendinous part is cut off by which it joins the aponeuroſis or vagina of the thigh.

t u u v The middle gluteus, u u its origin from the os ilium, v the tendon.

w x y The gluteus magnus, ariſing at x from the ſpine of the ilium, and cohering with the latiſſimus dorſi. y the tendon.

z The ſeminervoſus or ſemitendinoſis.

a b b c d e f The biceps muſcle of the leg. *a* its longer head. *b b* its ſhorter head. *c d e f* the tendon, ariſing firſt at *c* from the fleſh of the longer head, afterwards increaſed by the joining of the ſhorter head *d*, and inſerted by its principal end *e*, into the upper head of the fibula, but ſends off the ſmall portion *f*, which belongs to the tibia.

g h i k The external vaſtus. *h* the tendinous ſurface. *i* the tendon, inſerted into the patella at *k*.

l m n o p The rectus of the leg. *m* the tendinous part of its beginning. *n* the tendon, inſerted at *o* into the patella. *p* the aponeuroſis which runs from the tendon of the rectus over the fore part of the patella, and afterwards joins itſelf to the fore part of the ligament, which belongs to the tibia from the patella.

q r The internal vaſtus. *r* the tendon.

ſ t u The ligament belonging to the tibia from the patella. *t* the part where it ariſes from the patella. *u* that whole part which is inſerted behind the tibia.

w x y The outer head of the gemellus or gaſtrocknemius. *x* the tendinous ſurface. *y* the tendon.

z C D The ſoleus. *C* its origin from the upper head of the fibula. *D* the tendinous ſurface.

H L X The tendon of Achillis. *L* the inner part. *X* its inſertion into the calcaneum.

P The tendon of the plantaris.

S W Y O O O The long peroneus. *W* its origin from the head of the fibula. *Y O O O* the tendon ariſing from the fleſh at *Y*.

A The ligament proper to the long peroneus.

B B C C D D E The ſhort peroneus. C C the origin of the tendon from the fleſh. D D the tendon, inſerted at E into the fifth bone of the metatarſus.

F The ligament proper to the ſhort peroneus.

G H I K L M N O P Q R The long extenſor of the toes with the third peroneus. G the common fleſh of the extenſor and peroneus. H its origin from the tibia. I the third peroneus. K L M its tendon, ariſing from the

TAB. IX.

A. Bell Sculpt.

TAB. IX.

A. Bell Sculpt.

fleſh at K, and inſerted at M into the metatarſal bone of the little toe. N the tendon of the long extenſor of the toes, which ſplits itſelf into four tendons O P Q R running over the back or inſtep of the foot.

S S S T The tendon of the proper extenſor of the great toe, inſerted at T into the laſt bone of the great toe.

U V W W The tibialis anticus. V its origin from the tibia. W W its tendon.

X Y Z The ligament by which the tendons are covered and confined at the bottom of the leg, and upon the back of the foot. Y its upper horn. Z the lower horn.

a a a b c d e The ſhort extenſor of the toes. b c d e its tendons. b that belonging to the great toe, c that to the firſt of the ſmall toes, d that to the ſecond, e to the third.

f g h i k l Denote a tendon common to the long and ſhort extenſor of the toes, f the part produced from the longus, g the part from the brevis: and betwixt them is a mark of diviſion. h the end inſerted into the bone of the ſecond phalanx or order. i part of the common tendon running to the third bone. k the tendon running from one ſide to the third bone, which comes from the tendon of the ſhort extenſor. l the common end of the two portions belonging to the third bone into which it is inſerted.

m The aponeuroſis which comes from this ſide to the tendon of the ſhort extenſor of the toes. The like is alſo in the other toes: but in the little toe it joins the tendon of the long extenſor: in the great toe it joins the tendon of its proper extenſor.

n The firſt interoſſeus of the ſecond toe

o The thicker head of the ſecond interoſſeus of the ſecond toe.

p The larger head of the ſecond interoſſeus of the third toe.

q The larger head of the ſecond interoſſeus of the fourth toe.

r s t u v The abductor of the little toe in the part s, covered with an aponeuroſis. t its origin from the calcaneum. u part of the aponeuroſis by which it is covered, inſerted into the metatarſal bone of the little toe. v the tendon of the abductor inſerted into the firſt bone of the little toe.

w x The ſhort flexor of the little toe. w the part which is inſerted into the metatarſal bone of the little toe. x the part which by its tendinous end is inſerted into the firſt bone of the little toe.

y z The tendons of the long and ſhort flexor of the toes. Which are alſo to be ſeen in the next toe.

In the Right lower Extremity.

A B C The rectus muſcle of the leg. B its tendon inſerted into the patella. C the aponeuroſis running from the tendon before the patella, and joining itſelf to the fore part of the ligament that belongs to the tibia from the patella.

D E F G The ligament belonging to the tibia from the patella. E the part where it ariſes from below the patella, and inſerted into the tibia all below the part F. G its inner part.

H I The internal vaſtus. I its tendinous end inſerted into the ſide of the patella.

K L M The ſartorius. L its tendon, inſerted into the tibia at M.

N O The gracilis. O its tendon.

P Q R S The ſemimembranoſus. Q R the tendon, ariſing from the fleſh at Q. S its anterior aponeuroſis inſerted into the inner margin of the tibia.

T U The ſemitendinoſus. U the tendon.

V W X The inner head of the gemellus or gaſtrocnemius. W the tendinous ſurface. X the tendon which joins the outer part of the tendon of the ſoleus. Y the tendon of Achillis, inſerted into the calcaneum at Z.

C D H H The ſoleus. *D* the tendinous ſurface. *H H* its origin from the tibia.

L X The tendon of the plantaris, inſerted into the calcaneum at *X*.

P S The long flexor of the great toe. *S* the tendon.

W The ligament which retains the tendon of the long flexor of the great toe.

Y O O a The long flexor of the toes. *O O* its origin from the tibia. *a* the tendon ariſing from its flexor.

b b c The tendon of the tibialis poſticus. *c* its end inſerted into the inner tubercle of the navicular bone.

d e e The ligament that covers the tendon of the long flexor of the toes, and of the tibialis poſticus, faſtened to the inner ancle at *e e*.

f The ligament which retains the tendon of the tibialis poſticus.

g h h h The tibialis anticus. *h h h* the tendon.

i The upper horn of the ligament fixed to the tibia, by which are confined the tendons at the bottom of the leg, and on the back of the foot. *k* the lower horn of the ſame ligament.

l l m The tendon of the extenſor proper to the great toe, inſerted at *m* into the laſt bone of the great toe.

n A branch of the tendon of the proper extenſor of the great toe, inſerted into the firſt bone of that toe, found in ſome bodies.

o An aponeuroſis joining the tendon of the proper extenſor of the great toe.

p The common tendons of the extenſors upon theſe toes.

q q The two horns of the ligament by which the tendon of the long flexor of the great toe is confined in this place.

r The tendon of the long flexor of the great toe running under that toe.

s s t The abductor of the great toe. *v* its origin from the calcaneum. *v* the tendon, inſerted at *t* into the firſt bone of the great toe.

u u w The ſhort flexor of the great toe, adjoining itſelf to the tendon of the abductor at *w*.

x y The ſhort flexor of the toes. *y* its origin from the calcaneum

z The fleſhy head that joins the long flexor of the toes in the ſole of the foot, ariſing from the calcaneum.

In the left Arm and Hand.

A B B C D E F G H I K L M N O The deltoides. A B B the ſecond and poſterior of the firſt order of portions which make up this muſcle, ariſing at B B from the ſpine and upper proceſs of the ſcapula. C D the poſterior portion of the ſecond order, ariſing at D from the upper proceſs, E F the fourth portion of the firſt order, ariſing at F from the hollow and arch of the upper proceſs. G H the middle portion of the ſecond order ariſing at H from the upper proceſs. I K the third portion of the firſt order ariſing at K from the upper proceſs. L M the anterior portion of the ſecond order, ariſing at M from the upper proceſs. N O the firſt anterior portion of the firſt order; O its origin from the upper proceſs

P Q R The biceps. Q the tendon. R the aponeuroſis cut off.

S The internal brachialis.

T U V W X The triceps extenſor of the cubit. T that part of it called the longus. U the brevis. V the tendon, inſerted at W into the elbow. X the thinner point of the tendon inſerted into the fore part of the elbow and next adjacent ſpine of the ulna.

Y The internal ulnaris.

Z a The ſupinator longus. a the tendon.

b The pronator teres.

c d The radialis internus. d the tendon.

e e The ſublimis flexor of the fingers.

f f The long flexor of the thumb.

g The tendon of the ſecond longer radialis externus.

h i i i k The longer radialis externus. i i i k the tendon, inſerted at k into the metacarpal bone of the index.

l m m m The ſhorter radialis externus. m m m the tendon.

n o The ulnaris externus. o the tendon.

p q r s t The common extenſor of the fingers. q the tendon belonging to the index. r the tendon to the middle finger: which two tendons near the fingers are conjoined by the portion s, coming from the tendon of the middle finger to the tendon of the index. t the tendon belonging to the ring finger.

u The indicator tendon.

v w The extenſor proper to the little finger. w the tendon.

x y y z z The long abductor of the thumb. y y the tendon of its upper portion, which is ſplit at the end, of which one part belongs to the ſhort abductor of the thumb, the other to the metacarpal bone of the thumb. z z the tendon of its lower portion

a b The leſs extenſor of the thumb. *b* the tendon.

c c The tendon of the larger extenſor of the thumb.

d e The tendon common to the larger and leſs extenſor of the thumb, belonging to the laſt bone of the thumb *e*

f f The outer circular ligament of the wriſt.

g The ligament by which are confined the tendons of the long abductor and leſs extenſor of the thumb.

The inner ligament of the wriſt

i k The ſhort abductor of the thumb. *k* the aponeuroſis which it joins to the common tendon of the extenſors of the thumb.

l The opponent muſcle of the thumb, inſerted into the outer edge of the metacarpal bone of the thumb.

m The aponeuroſis which joins the tendon of the larger extenſor of the thumb, ariſing partly from the capſule of the joint of the thumb with its metacarpal bone, and in part from the ſhort flexor of the thumb.

n o The adductor of the thumb, inſerted by its tendinous end *o* into the firſt bone of the thumb.

p The outer interoſſeus muſcle of the index, ariſing from its metacarpal bone.

q The abductor of the index.

r The firſt lumbricalis.

ſ The aponeuroſis which proceeds partly from the abductor of the index, and in part from its lumbricalis, and joins the tendon of the extenſors of the index.

s v The tendon common to the extenſors of the index. *v* its end inſerted into the ſecond bone of the index.

t The tendon of the firſt lumbricalis, which being increaſed by a portion received from the common tendon of the extenſors, runs to the third bone of the index *u*.

w The tendon of the ſecond interoſſeus of the index, together with a portion which it receives from the common tendon of the extenſors running to the third bone of the index.

x The common end of the tendons *u* and *w* belonging to the third bone of the index into which it is inſerted.

y The tendon common to the ſecond lumbricalis and outer interoſſeus of the middle finger: which tendon being increaſed by a portion received from the extenſor tendon of the middle finger, runs to the third bone of that finger, joining in its common end with a like tendon from the other finger of this ſide, and is inſerted into the third bone of the ſaid finger.

z The tendon common to the fourth lumbricalis with the outer interoſſeus of the little finger: which tendon being increaſed by a portion received from the extenſor tendon of this finger, runs to its third bone.

Along the fingers within the hand run the tendons of the ſublimis and profundus flexors, which tendons are retained or tied down by their ligaments, as may be better ſeen in Tab. I.

In the Right Arm.

a b c d e The triceps extenſor of the elbow or fore-arm, *a* the part called extenſor longus. *b* the part called brachialis externus. *c* the tendon of the triceps, inſerted into the olecranum or elbow. *e* the thin tendon ariſing from the ſurface of the external brachialis, and belonging to the upper part of the poſterior or larger condyle of the humerus.

f The brachialis internus.

g h i The biceps flexor of the fore-arm. *h* its aponeuroſis cut off. Near *i* appears the tendon.

k The ſupinator longus.

l The pronator teres.

m The radialis internus.

n o The long palmaris. Immediately below *o* appears the beginning of its tendon.

p The ſublimis perforatus flexor of the fingers.

In the Right Hand.

q r ſ The ulnaris internus. r one of its origins from the poſterior condyle of the humerus. ſ its other origin from the elbow.
t The ulnaris externus.
a The ſhort abductor of the thumb. b the aponeuroſis which going off from its tendon, joins itſelf to the common tendon of the extenſors of the thumb.
c Part of the ſhort flexor of the thumb, which may be reckoned as a ſecond ſhort abductor of it, inſerted by its tendinous end into the firſt bone of the thumb.
d Part of the ſhort flexor of the thumb, inſerted into the ſeſamoidal bone neareſt the index, and into the next part of the firſt bone of the thumb.
e The abductor of the thumb.
f f The tendon of the long flexor of the thumb.
g Two ligaments which confine the tendon of the long flexor of the thumb marked *m* in the left hand of Tab. V.
h The palmaris brevis quadratus.
i The ſhort flexor of the little finger.
k The abductor of the little finger.
l The abductor of the fourth metacarpal bone of the hand, inſerted into that bone.

Finally, we have omitted to fix letters on the tendons and aponeuroſes ſtretched over the back of the hand and fingers, becauſe they may be more eaſily known from the fifth table.

THE Tenth Anatomical Table OF THE HUMAN MUSCLES EXPLAINED.

FIGURE I.

COMES next after that of the head and neck in the ninth table; and repreſents the muſcles ſeated before the vertebrae of the neck, below the head, with the os hyoides, larynx, and part of the pharynx; to ſhew which the latiſſimus colli and maſtoideus are here taken off. No other muſcles are here figured either in the head or vertebræ; not even thoſe which adhere to the fore part of the vertebræ behind the pharynx, as the rectus internus, major capitis, and longus colli, leſt by theſe the other muſcles ſhould be obſcured.

a The pterygoideus externus.
b c Pterygoideus internus, c its inſertion into the lower jaw.
d The mylohyoideus, the end of which, inſerted into the baſis of the os hyoides, appears immediately below the tendon of the digaſtric i of the lower jaw.
e f The ſtylohyoideus inſerted by its tendon f into the baſis of the os hyoides.
g h i i The digaſtric of the lower jaw. g the firſt venter, h its ſecond venter, i i the middle tendon.
k l The baſiogloſſus. l part of its origin from the horn of the os hyoides: and immediately above k appears part of the ſtylogloſſus, as in Fig. 2. m.
m The ceratogloſſus ariſing from the horn of the os hyoides.
n o The os hyoides. n the horn, o its baſis.
p The common end of the ſtylopharyngeus and palatopharyngeus. Part of the end of which alſo lies betwixt the ceratogloſſus and heads of the middle conſtrictor of the pharynx: for which conſult the figures following.
Near p is a ligament belonging to the upper proceſs of the thyroide cartilage from the horn of the hyoidal bone. See Fig. 4. x.
q r s t The hyothyroideus. r s its origin, from the horn r of the hyoidal bone, and from its baſis s. t its thyroidal inſertion.
u The thyroide cartilage.
v w x y The cricothyroideus. v its fore part inſerted into the thyroide cartilage. w x y its back part, of which a portion at x joins the lower conſtrictor of the pharynx. y its thyroidal inſertion.
z The cricoide cartilage.
a The gula cut off.
b c The lower conſtrictor of the pharynx. *c* its origin from the cricoide cartilage.
d e f The middle conſtrictor of the pharynx. *e* the head which ariſes from the graniform bone of the os hyoides. *f* the head which ariſes from the end of the horn of the os hyoides.
g The upper conſtrictor of the pharynx.

FIGURE II.

In which the outer muſcles of the firſt figure and left ſide of the lower jaw are taken off, repreſents the next order of muſcles, with the os hyoides, larynx, gula, and tongue. But with the left ſide of the lower jaw are removed the pterygoideus, externus and internus, the mylohyoideus, ſtylohyoideus, biventer maxillæ, hyothyroideus and cricothyroideus.

a The upper jaw bone.
b The outer wing of the pterygoidal proceſs.
c d Part of the palate bone, which being inſerted betwixt the pterygoidal proceſs and upper jaw, connects them together. c part of it belonging to the cavity of the pterygoidal proceſs.
e e The inner wing of the pterygoidal proceſs, in whoſe bottom is the hamulus or hooked proceſs.
f The circumflex muſcle of the moveable palate.
g The elevator of the moving palate.
h The tongue.
Near i is the conſtrictor of the iſthmus of the fauces. See Fig. 4. l.
k l m The ſtylogloſſus. l its continuation to the ceratogloſſus. m its courſe from thence as it runs in the direction of the tongue, and is inſerted into it.
n The ceratogloſſus ariſing from the horn of the os hyoides.
o The baſiogloſſus, whoſe origin appears from the horn of the os hyoides.
p The lingualis.
q The geniogloſſus ariſing from the lower jaw.
r s Geniohyoideus. s its tendinous origin from the lower jaw. The reſt of it is inſerted into the baſis and horn of the os hyoides: alſo part of its end runs behind the baſiogloſſus.
t The lower jaw cut in two.
u v The os hyoides. u the baſis. v the horn.
Near the lower part of the end of the horn of the os hyoides is part of the ligament which goes from thence to the upper proceſs of the thyroide cartilage. See Fig. 4. x.
w The ſtylopharyngeus.
x The common end of the ſtylopharyngeus and palatopharyngeus, the extremity of which appears betwixt the ceratogloſſus and two heads of the middle conſtrictor of the pharynx. See Fig. 4. g.
y y z The upper conſtrictor of the pharynx. z a portion of it which ariſes partly from the lower jaw, and is in part continued to the buccinator; from both which it is cut off.
a b c The middle conſtrictor of the pharynx. *b* the head which ariſes from the little grain-like bone of the os hyoides. *c* the head which ariſes from the end of the horn of the os hyoides.
d e f g b The lower conſtrictor of the pharynx. *e f g* the head by which it ariſes from the thyroide cartilage, from *e* to *f*, ſpringing from the ſide of the ſaid cartilage, the part *f* from the lower edge thereof, and the part *g* from the lower proceſs. *b* the head by which it ariſes from the annular cartilage.
i k The thyroide cartilage. *k* the protuberance from whence ariſes the middle conſtrictor of the pharynx.
l A ligament tying the annular to the thyroide cartilage.
m The annular cartilage.
n The gula cut off.

TAB. X.

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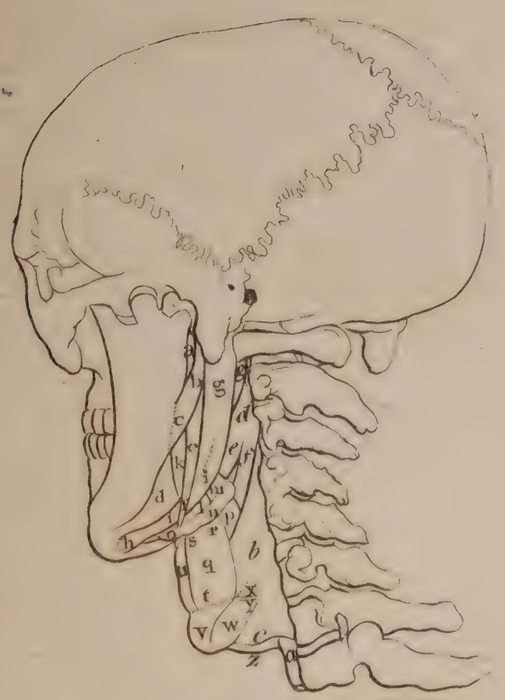

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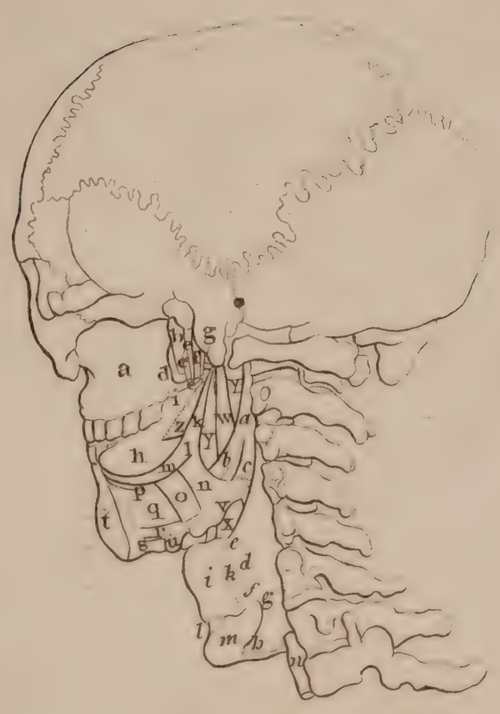

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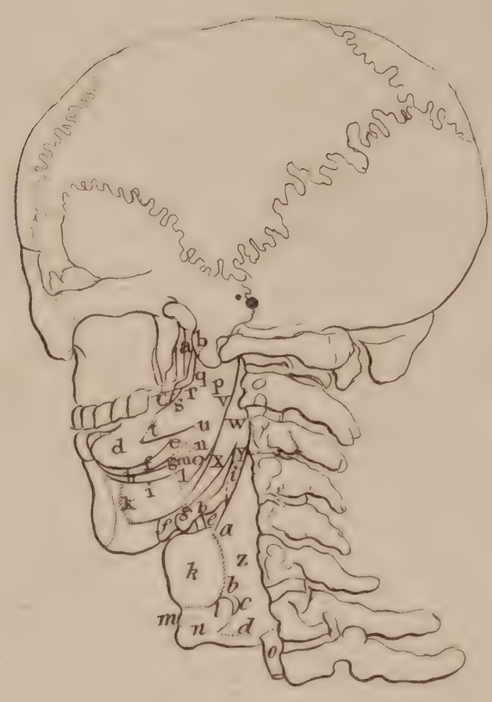

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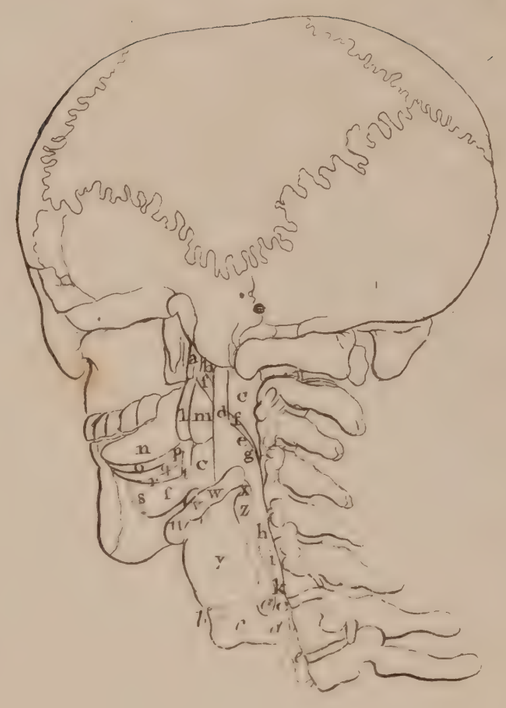

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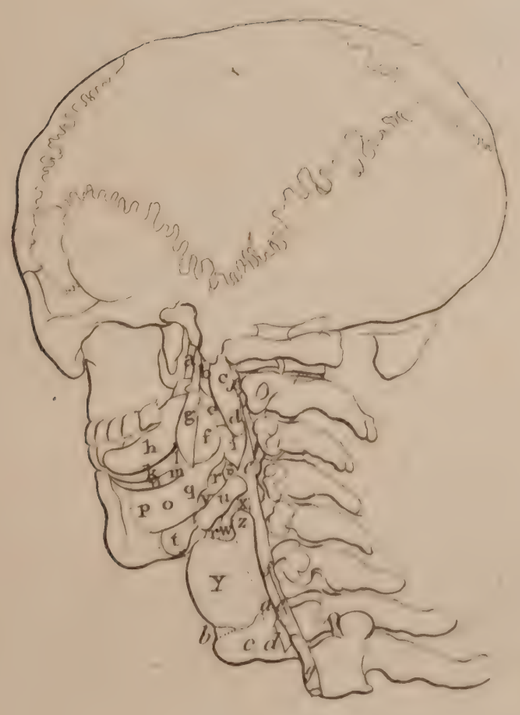

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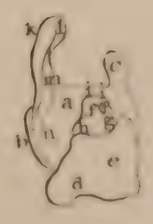

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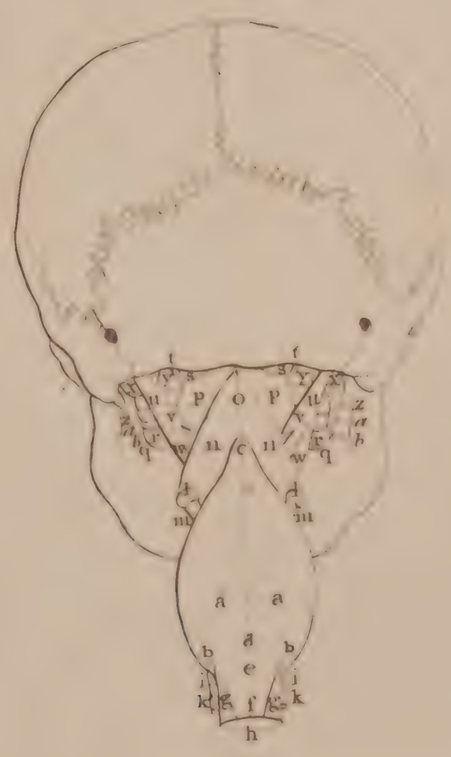

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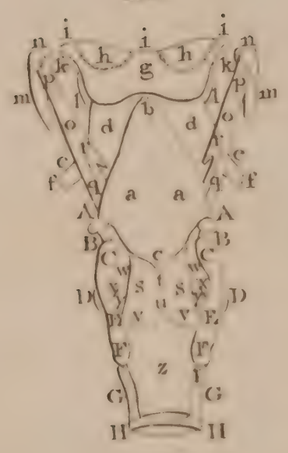

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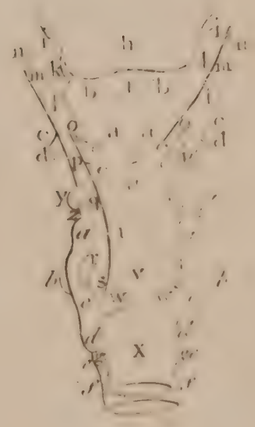

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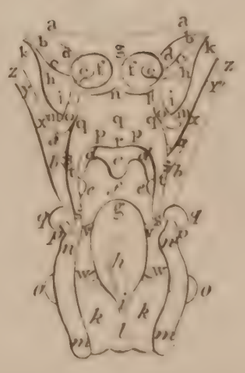

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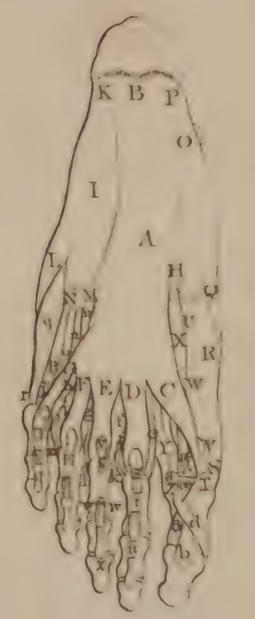

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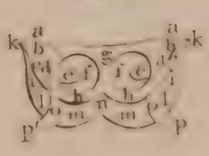

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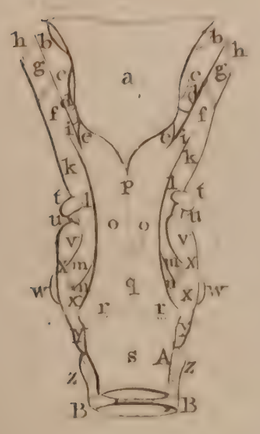

XII.

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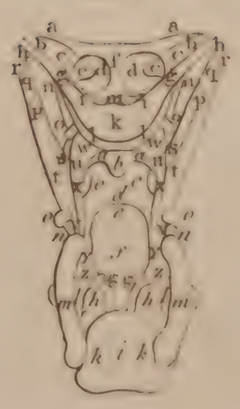

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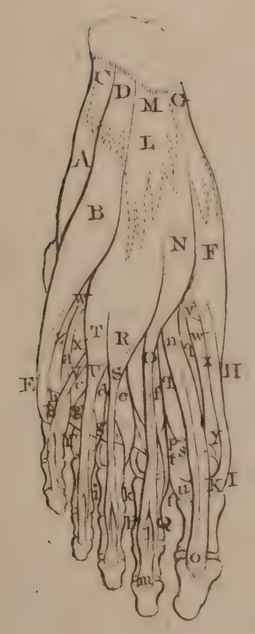

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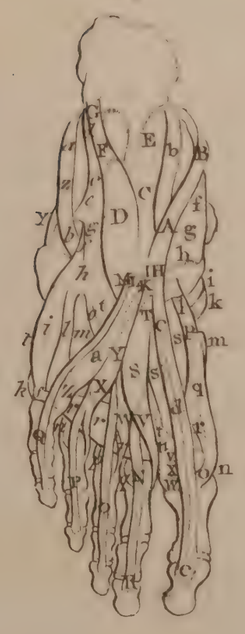

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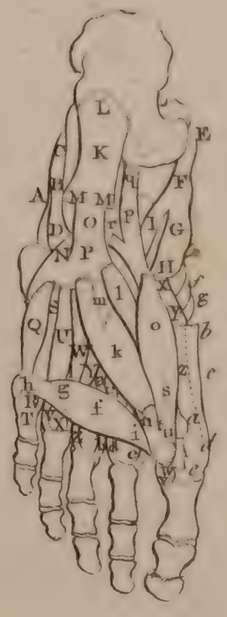

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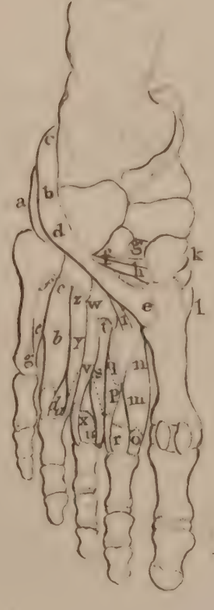

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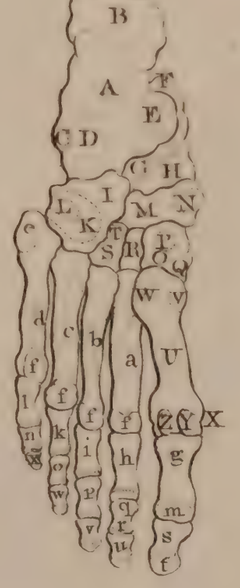

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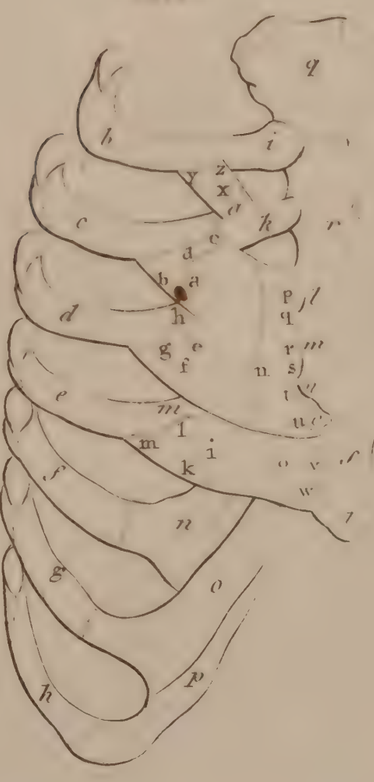


A. Bell. sculp.

FIGURE III.

Repreſents the next order of muſcles after thoſe which lie outermoſt in the preceding figure are taken off; namely, the ſtylogloſſus, ceratogloſſus, baſiogloſſus, geniohyoideus, and ſtylopharyngeus.

The upper-jaw bone, with the proceſſus pterygoideus, its wings, hook, and excavations, as alſo the palate-bone with the lower jaw divided, have neither of them any letters affixed in the preſent, or two next ſucceeding figures; becauſe theſe may be known from the ſecond figure, and therefore there is no reaſon for loading theſe laſt figures with the former.

a The circumflex muſcle of the moveable palate.
b The elevator of the ſoft or moveable palate.
Near c is part of the conſtrictor of the iſthmus of the fauces. See Fig. 4. l.
d The tongue.
e f The ſtylogloſſus, cut off at e, but in the part f, running according to the length of the tongue, and cohering with it.
g The ceratogloſſus and baſiogloſſus cut off.
h The lingualis.
i k l m n o The geniogloſſus. k its origin from the lower jaw. At l the thin faſciculi of fibres are incurvated by the ſide of the pharynx; ſome of which fibres at m join the ceratogloſſus and ſtylogloſſus; others at n join the upper conſtrictor of the pharynx, while others at o vaniſh in the membrane of the pharynx.
p q r s t u The upper conſtrictor of the pharynx. q the upper part which goes out of the circumflex muſcle of the moveable palate. r the part which ariſes from the internal plate of the pterygoide proceſs, and from the hook. s the part which is cut off from the buccinator. t the part which ariſes from the lower jaw. u the part going from the tongue: below which the part n joins it from the fibres of the geniogloſſus, which it incurvates through the ſide of the pharynx.
v Denotes a ſpace betwixt the upper and middle conſtrictor, thro' which the ſtylopharyngeus is detached, paſſing under the middle conſtrictor.
w x y The middle conſtrictor of the pharynx. x one of the heads ariſing from the ſmall grain-like bone of the os hyoides: y the other head ariſing from the end of the horn of the os hyoides.
z *a b c d* The lower conſtrictor of the pharynx. *a b c* the head which ariſes from the thyroide cartilage: *a* and *b* denote its origin from the ſide of the thyroide cartilage, *b* from the lower edge of the ſaid cartilage, and *c* from the lower proceſs. *d* the head ariſing from the annular cartilage.
e The common end of the ſtylopharyngeus and palatopharyngeus: part of which appears betwixt the heads of the middle conſtrictor of the pharynx x. y: See Fig. 4 g.
f g h The os hyoides. *f* the baſis. *g* the grain-like little bone, *h* the horn.
A little above *g* is a ſmall part of the chondrogloſſus muſcle. See Fig. 4. t.
A little below *i* is a ligament which belongs to the upper proceſs of the thyroide cartilage from the end of the horn of the os hyoides. See Fig. 4. x.
k The thyroide cartilage, whoſe lower proceſs is near *l*. See *a*.
m The ligament by which the thyroide and cricoide cartilage are tied one to the other.
n The cricoide cartilage.
o The gula cut off.

FIGURE IV.

The outermoſt muſcles of the third figure being removed, we here exhibit the next order, together with the tongue, os hyoides, larynx, pharynx, or beginning of the gula, alſo one of the tonſils, and the membrane of the fauces laid bare altogether. But we have here added the beginning of the ſtylopharyngeus, that this muſcle might appear entire. In this figure are removed part of the geniogloſſus that is incurvated by the ſide of the pharynx; alſo the upper, middle, and lower conſtrictor of the pharynx.

a The circumflex muſcle of the moveable palate.
b The elevator of the palate.
c c c The membrane of the pharynx naked.
d e The ſtylopharyngeus. e that part of it which joins itſelf to the upper part of the palatopharyngeus. See i. Fig. 2.
f f The palatopharyngeus.
g g h i k the common end of the ſtylopharyngeus and palatopharyngeus. h part of it which is inſerted into the external ſide of the edge of the thyroide cartilage, at the root of the upper proceſs. i k another part, which at i is inſerted into the remaining edge, and at k diſappearing below in the membrane of the pharynx.
l The conſtrictor of the iſthmus of the fauces.
m The tonſil.
n The tongue.
o p The ſtylogloſſus where it joins the tongue, cut off at p. See Fig. 2. k m.
q The baſiogloſſus and ceratogloſſus cut off.
r The lingualis.
f s The geniogloſſus. s its origin from the lower jaw. The contexture of fibres, incurvated by the ſide of the pharynx, is here removed, l. Fig. 3.
t The chondrogloſſus ariſing from the grain-like bone of the os hyoides.
u v w The os hyoides. u the baſis, above v appears the ſmall grain-like bone, w the horn.
x The ligament which belongs to the upper proceſs of the thyroide cartilage from the end of the horn of the os hyoides.
y z *a* The thyroide cartilage. z its upper proceſs, *a* its lower proceſs.
b The ligament by which the ſcutiform and annular cartilage are faſtened together in this place.
c The annular cartilage.
Near *d* is the poſterior cricoarytaenoideus muſcle. See a Fig. 6.
e The gula cut off.

FIGURE V.

In this figure are taken away, not only ſome of the outer muſcles of the fourth figure, but alſo the pharynx is ſlit longitudinally, laid open, and the left part of it cut off, that not only the cavity thereof, but alſo the moveable palate, with the root of the tongue and epiglottis, might appear. The muſcles taken off are the ſtylopharyngeus and palatopharyngeus, with its common extremity, and the chondrogloſſus.

a The circumflex muſcle of the moveable or ſoft palate.
b The elevator of the palate.
c The moveable palate. d the uvula. e the edge of the ſoft palate cut off.
f The tonſil.
g The conſtrictor of the iſthmus of the fauces.
h i The tongue. h the part which is contained in the mouth. i the part where it is incurvated within the fauces towards the baſis of the tongue and os hyoides.
k l The ſtylogloſſus muſcle cut off at l.
m The baſiogloſſus and ceratogloſſus cut off.
n The lingualis.
o p q The geniogloſſus. p its origin from the lower jaw. q the part which belongs to the tongue.
r r s The epiglottis. r r the convex part, s the concave part.
t u v The os hyoides. t the baſis. u the horn. v the ſmall grain-like bone.
w The inner membrane of the larynx.
x The ligament belonging to the upper proceſs of the thyroide cartilage from the end of the horn of the os hyoides.
y z *a* The thyroide cartilage. z The upper proceſs, *a* the lower proceſs.
b The ligament by which the ſcutiform and annular cartilage are tied one to the other.
c The annular cartilage.
Near *d* is the poſterior cricoarytaenoideus. See Fig. 6. 2.
e e The cavity of the pharynx laid open.
f f The membrane of the pharynx cut open.
g The gula cut off.

FIGURE VI.

This figure follows after that of the larynx contained in the figure laſt preceding. The left ſide of the thyroide cartilage being cut off, the remainder repreſents the larynx, with the muſcles which lie next under the ſide of the thyroide cartilage, as alſo thoſe which are ſeated in the back part of the larynx.

We have not fixed letters on the ſcutiform and annular cartilage, with the epiglottis, poſterior angle of the baſis of the left arytenoide, and the ſmall heads of the arytenoide cartilages; becauſe theſe may be better known or underſtood from the ſeventh figure.

a The poſterior cricoarytænoideus, ariſing from the annular cartilage, and inſerted into the arytenoide.
b The lateral cricoarytænoideus, ariſing from the upper margin of the cricoide cartilage.
c d The faſciculus, ariſing from the inner and upper part of the thyroide cartilage, not far from its notch or fiſſure, and inſerted into the baſis of the arytenoide cartilage. d the beginning cut off from the thyroide cartilage.
e The thyro-arytenoideus muſcle, ariſing in one part from the thyroide cartilage, and in the other from the ligament by which the annular and thyroide cartilage are tied together.
f g h A thin contexture of fleſhy fibres, which ariſing from the thyroide cartilage near the outer part of the origin of the thyro-arytenoideus, aſcends by the outer part f of the ſaid muſcle behind g, by the ſide of the glottis and epiglottis h.
i The depreſſor of the epiglottis.
k The ligament by which the annular and thyroide cartilage are tied one to the other.
l The left oblique arytenoideus muſcle.
m m n The right oblique arytenoideus, n that part of it which goes by the margin of the glottis to the epiglottis; and the other part, near and betwixt n m, is continued on to the thyro-arytenoideus.
o The tranſverſe arytenoideus.
p The membrane which forms the lateral part of the glottis, extended from the little head of the arytenoide cartilage to the upper part of the epiglottis.

FIGURE VII.

Repreſents the ſame contexture of the cartilages of the larynx as the preceding figure, but wholly naked or freed from the muſcles and membranes.

a b c The inner ſide of the right half of the thyroide cartilage. b the left half, which is here cut off and removed. c the upper proceſs.
d e The cricoide cartilage. e the tubercle to which is tied the lower proceſs of the thyroide cartilage.

f g h The arytenoide cartilages. g h the baſis; g the baſis of the poſterior angle, projecting like a tubercle; h the anterior angle of the baſis, hollow in this part.
i The ſmall heads added to the arytenoide cartilages.
k l m n The epiglottis. k the back. l the concave part. m a round body projecting like a ligament in the concave part of the epiglottis, and ariſing from the inner part of the thyroide cartilage, below its fiſſure.

FIGURE VIII.

Repreſents the firſt order of the muſcles which are ſeated round the larynx, as they appear viewed on the back part. To ſhew theſe muſcles more diſtinctly, we have added not only the pharynx, and part of the gula, which is continued to it, but alſo the os hyoides, larynx, and part of the wind-pipe; likewiſe the naked bones of the head, to which the pharynx is connected.

We have not here added a full explanation of the bones or parts of the ſcull, becauſe they may be better underſtood from the tables which I have prepared, wherein the figures of the bones are expreſſed in their natural magnitude.

a b. a b c d e The lower conſtrictors of the pharynx. b the origin from the cricoide cartilage. c the point in which they terminate above, from c to d the fibres running together form an angle. e the part where the right fibres are continued to the left in a curved direction.
f The inner tranſverſe fibres of the gula in this place laid bare. g g the outer fibres deſcending obliquely backwards on each ſide.
h The gula cut off.
Juſt above i i is the annular cartilage. Se Fig. 14. *i k k*.
k k The wind-pipe cut off.
l l The ends of the horns of the os hyoides.
m m The ligaments which belong to the upper proceſſes of the thyroide cartilage from the ends of the horns of the os hyoides. See Fig. 9. B. B.
n. n o The middle conſtrictors of the pharynx. o the part where the fibres meet together in angles.
p q r. p q r The upper conſtrictors of the pharynx. q the origin from the lower jaw near the innermoſt of the grinding teeth. r the part where it is cut off from the buccinator.
s s The naked membrane of the pharynx.
Juſt below t t is the circumflex muſcle of the moveable palate.
u v w. u v w The ſtyſopharyngei muſcles. v the upper and leſs part. w the lower and larger part.
x x the ſtyloide proceſſes of the temporal bones. See Fig. 9. m. m.
y y The pterygoide proceſſes of the multiform bone.
z z The upper jaw bone, where it forms the gums above the innermoſt of the grinding teeth.
a a The innermoſt of the upper grinders, which are the fifth in order.
b b The fifth of the lower grinding teeth.

FIGURE IX.

Exhibits the next view after the lower conſtrictor of the pharynx is taken off. But we have not added the bones of the head, that the upper parts of the pharynx might not be obſcured, and becauſe the manner in which the pharynx adheres to the bones of the head may be underſtood from the figure laſt preceding. But the ſtyloide proceſſes are added, to ſhew the origin of the ſtylopharyngei.

a. a b c The middle conſtrictors of the pharynx. b the upper point in which they meet. c the lower point. From b to c the fibres converge angularly.
d e f. d e f The upper conſtrictors of the pharynx. At e cut off from the buccinator. f the part which ariſes from the lower jaw.
g h h i i i The naked membrane of the pharynx, in which is a ſinuoſity at h h near the protuberant ends of the larger internal recti muſcles of the head. i i i the parts where it is cut off from the baſis of the cranium round the upper part of the Euſtachian tubes and internal foramina of the noſtrils.
k k The elevators of the moveable palate. See Fig. 13. and 14. g. g.
l l The circumflex muſcle of the moveable palate. See Fig. 14. n. n. and 15. h. h.
m n. m n The ſtyloide proceſſes of the temporal bones cut off at their roots n n.
o p q r. o p q r The ſtylopharyngei. p the tendinous beginning ariſing from the ſtyloide proceſs. q the lower and larger part. r the upper and leſs part.
s. s t u v v Parts of the common ends of the ſtylopharyngei, and palatopharyngei, ariſing principally from the palatopharyngei, and in this place, from t to u, the fibres meet together, or run one betwixt the other, in the part from u to v, vaniſhing on the back ſide of the membrane of the pharynx; at v inſerted into the thyroide cartilage.
w x y. w x y Parts of the common ends of the ſtylopharyngei and palatopharyngei, which ariſe chiefly from the ſtylopharyngei. x a portion of them inſerted into the outer ſide of the edge of the thyroide cartilage to the root of the upper proceſs. y the portion inſerted into the remaining part of the margin of ſaid cartilage down to the root of the lower proceſs.
z The naked membrane of the lower part of the pharynx which is continued to the gula.
A A The ends of the horns of the os hyoides.
B B The ligaments which belong to the upper proceſſes of the thyroide cartilage from the ends of the horns of the os hyoides.

C C D D E E F F The thyroide cartilage. C C the upper proceſſes. D D the tubercles which are in the outer ſides at the roots of the upper proceſſes. E E the poſterior edges. F F the lower proceſſes.
G G The annular cartilage. H H the wind-pipe cut off.
I The poſterior cricoarytaenoideus. In the other ſide may be perceived the left.

FIGURE X.

Repreſents the next view of the muſcles after the middle conſtrictor of the pharynx is taken off. Alſo, we did not think the ſtyloide proceſſes neceſſary to be added in this figure, becauſe they are in the ninth preceding.

a b c d e e. a b c d e e f g The upper conſtrictors of the pharynx. a the lower part which croſſes the upper part b. c d the portion that is partly cut off from the buccinator at c, and in part ariſes from the lower jaw at d. e e portions which paſs betwixt the upper and lower part of the ſtylopharyngeus, and come hither through the upper part. f the upper tip or point in which the right and left of theſe conſtrictors meet together. From f to g the fibres of both of them meet in angles.
h The naked membrane of the pharynx, as in Fig. 9. g h h i i i.
i i The elevators of the ſoft or moveable palate. See Fig. 13. and 14. g g.
k k The circumflex muſcle of the palate. See Fig. 14. n n. and Fig. 15. h h.
l m n o p. l m n o p The ſtylopharyngei. m the tendinous beginning. n the part cut off from the ſtyloide proceſs. o the upper and leſs part that forms two faſciculi, which both of them paſs ſeparately under the fibres of the upper conſtrictor. p the lower and larger part.
q r s. q r s Parts of the common ends of the ſtylopharyngei and palatopharyngei, which are produced from the ſtylopharyngei. r the portion inſerted into the outer ſide of the edge of the thyroide cartilage, at the root of the upper proceſs. s the portion inſerted into the ſubſequent part of the edge, down to the root of the lower proceſs.
t. t u v w Parts of the common ends of the ſtylopharyngei and palatopharyngei, whoſe fibres run together from u to v; from v w the fibres vaniſh in the back part of the membrane of the pharynx, and at w they are inſerted into the thyroide cartilage.
x The naked membrane of the lower part of the pharynx, which is continued to part of the gula.
y y The ends of the horns of the os hyoides.
z z The ligaments which belong to the upper proceſſes of the thyroide cartilage from the ends of the horns of the os hyoides.
a a b b c c d d The thyroide cartilage. *a a* the upper proceſſes. *b b* the protuberances in the outer ſides at the roots of the upper proceſſes. *c c* the poſterior edges. *d d* the lower proceſſes.
e e The annular cartilage.
f f The wind-pipe cut off.
g The poſterior cricoarytaenoideus. The left is alſo repreſented.

FIGURE XI.

Repreſents the next face of the muſcles after the upper conſtrictor of the pharynx is taken off.

a The naked membrane of the pharynx. See Fig. 9. h h i i i.
b b The elevators of the moveable palate. See fig. 13. and 14. g. g.
c c The circumflex muſcle of the ſoft palate. See Fig. 14. n n. and 15. h h.
d d The ſmall hooks of the pterygoide proceſſes. See Fig. 16. p. p.
e e The palatopharyngei.
f g h i k. f g h i k The ſtylopharyngei. g the tendinous beginning. h the part where it is cut off from the ſtyloide proceſs. i the upper and leſs part. k the lower and larger part.
l m n. l m n Parts of the common ends of the ſtylopharyngei and palatopharyngei, which ariſe from the ſtylopharyngei. m a portion of them inſerted into the outer ſide of the edge of the thyroide cartilage at the root of the upper proceſs. n the portion which is inſerted into the ſubſequent part of the margin down to the root of the lower proceſs.
o. o p q r Parts of the common ends of the ſtylopharyngei and palatopharyngei, the fibres of which, from p to q, run together; from q to r they vaniſh in the back part of the membrane of the pharynx, and at r they are inſerted into the thyroide cartilage.
s The naked membrane of the lower part of the pharynx, to which is continued part of the gula.
t t The ends of the horns of the os hyoides.
u u The ligaments which belong to the upper proceſſes of the thyroide cartilage from the ends of the horns of the os hyoides.
v v w w x x y y The thyroide cartilage. v v the upper proceſſes. w w the tubercles which are in the outer ſides, at the roots of the upper proceſſes. x x the poſterior edges. y y the lower proceſſes.
z z The annular cartilage.
A The cricoarytaenoideus poſticus, which is alſo repreſented in the left ſide.
B B The wind pipe cut off.

FIGURE XII.

Exhibits the internal ſurface of the pharynx entire, as it appears after the whole back part of the pharynx, and adjacent gula, are cut off longitudinally on each ſide, and removed. This figure we have added to render the four following more intelligible.

a a b b c c The edges, from whence is cut off the back part of the pharynx and gula.

d e. d e The Euſtachian tubes jetting out. e e the orifices by which they open laterally into the poſterior foramina of the noſtrils.
f The ſeptum of the noſtrils.
g g The cavity of the noſtrils, in which are ſeated the lower oſſa ſpongioſa h h, covered with the mucous membrane.
i i k l The ſoft palate and uvula. k the part where the body of the uvula is protuberant. l the pendulous part of the uvula.
m m The poſterior arches which deſcend laterally from the ſoft palate thro' the ſides of the pharynx.
n n The tonſils, prominent beyond the poſterior arches.
o o p The tongue. p the middle foſſula or cavity upon which the uvula is incumbent.
q The epiglottis.
r r The membranous ſides of the glottis.
s s The protuberance of the ſmall heads which lie upon the arytenoide cartilages.
Betwixt q r r s s is included the glottis.
t The rima or ſlit of the glottis.
t That which is called the lateral ligament of the epiglottis, where part of it belongs to the ſide of the epiglottis, under the inveſting membrane and common end of the ſtylopharyngeus and palatopharyngeus. The ſame is alſo in the left ſide.
u u concavities at the ſides of the tube of the larynx, ſeated betwixt that and the thyroide cartilage.
v The back part of the tube of the larynx projecting within the pharynx.
w w The elevators of the ſoft palate See Fig. 13. and 14. g g.
x x The circumflex muſcle of the ſoft palate. See Fig. 14. n n. and 15. h h.
y y The ſmall hooks of the pterygoide proceſſes. See Fig. 16. p p.
z z The palatopharyngei cut off.
a b c d e. a b c d e The ſtylopharyngei. *b* the tendinous beginning cut off at *c* from the ſtyloide proceſs. *d* the lower and larger part. *e* the upper and leſs part.
f f The ends of the horns of the os hyoides.
g g The ligaments which belong to the upper proceſſes of the thyroide cartilage from the ends of the horns of the os hyoides.
h h i i k k The thyroide cartilage. *h h* the upper proceſſes. *i i* the tubercles which are ſeated in the outer ſides at the roots of the upper proceſſes. *k k* the lower proceſſes.
l l The annular cartilage.
m m The wind-pipe cut off.
Here are alſo repreſented parts of the cricoarytenoidei poſtici, which may be underſtood from Fig. XI. laſt preceding.

FIGURE XIII.

Repreſents thoſe muſcles which lie immediately under the membrane that covers the parts expreſſed in the fourth and tenth figure; which membrane is here removed. The beginning of the gula and wind-pipe are alſo taken away, as they are not here neceſſary.

a a The place where the back part of the pharynx is cut off.
b c. b c The Euſtachian tubes, as yet covered with their membrane which lines the inſide of the fauces.
c c The orifices by which they open at the ſides of the poſterior foramina of the noſtrils.
d d the cavities of the noſtrils.
e e The lower oſſa ſpongioſa covered with the mucous membrane.
f The ſeptum or partition of the noſtrils.
g h i. g h i The elevators of the ſoft or moveable palate. h the tendinous part of the beginning, i the lower part of it, forming a diſtinct portion.
k k The circumflex muſcle of the ſoft or moveable palate. See Fig. 15. h h.
l l The ſmall hooks of the pterygoide proceſſes. See Fig. 16. p p.
m The azygus or ſingle muſcle of the uvula, from its beginning interwove with the tendinous ends of the elevators of the ſoft palate, and with the tendinous membrane, which coming from the noſe, paſſes through the upper part of the ſoft palate, m Fig. 14.
n o p. n o p The palatopharyngei. n the part which goes through the ſoft palate above the elevator of the ſaid palate, and paſſing out at o from the tendinous membrane, which coming from the noſe, paſſes through the upper part of the ſoft palate, m Fig. 14. p. the part which afterwards paſſes under the elevator of the palate.
q q The ſalpingopharyngei joining to the palatopharyngei.
r s t u v. r s t u v The ſtylopharyngei. s the tendinous beginning, t the part where it is cut off from the ſtyloide proceſs. u the upper and leſs part of the ſtylopharyngeus, v the lower and larger part.
w w Parts of the common ends of the palatopharyngei, ſalpingopharyngei, and ſtylopharyngei, which deſcend through the ſides of the pharynx, are protuberant within the ſame, and form the poſterior arches which deſcend along the ſides of the fauces from the ſoft palate.
x y. x y Parts of the common ends of the ſtylopharyngei and palatopharyngei produced from the ſtylopharyngei; of which the part x runs inward through the lateral ligament of the epiglottis, near the lateral margin or edge of the epiglottis; the part y is inſerted into the upper edge of the thyroide cartilage betwixt its upper proceſs and the epiglottis.
z z The poſterior edges of the ſoft or moveable palate.
a The uvula.
b b The tonſils, which are protuberant beyond the palatopharyngei muſcles.
c The tongue.
d The epiglottis.
e e The membranous ſides of the glottis.
f f The ſmall heads which are added to the arytenoide cartilages.
g g The oblique arytenoidei muſcles which have two terminations, one upper, running through the membranous ſides of the glottis to the epiglottis; the other lower, which conti..es itſelf to the thyro-arytenoideus.
h h h h The arytenoideus tranſverſus.
i k k. i k k The cricoarytenoidei poſtici, ariſing at *k k* from the cricoide cartilage.
l The cricoide cartilage.
m m The thyroide cartilage.
n n The ligaments which belong to the upper proceſſes of the thyroide cartilage from the ends of the horns of the os hyoides.
o o The ends of the horns of the os hyoides.

FIGURE XIV.

Repreſents the next face of the muſcles, viz. of the arytenoidei obliqui, and tranſverſus, with the poſterior cricoarytenoidei, and the membrane which forms the ſides of the glottis betwixt the arytenoide cartilages and the epiglottis, after the ſalpingopharyngei, azygus of the uvula, and parts of the palatopharyngei which run over the ends of the elevators of the ſoft palate are taken away.

a a Denotes the place from whence the back part of the pharynx is cut off.
b c. b c The Euſtachian tubes covered with the membrane which forms and lines the inſide of the fauces. c c the orifices which open laterally in the poſterior foramina of the noſtrils.
d d The cavities of the noſtrils.
e e The lower oſſa ſpongioſa covered with the mucous membrane.
f The partition of the noſtrils.
g h i k l. g h i k l The elevators of the ſoft palate. h the tendinous part of its beginning. i the portion which is faſtened by a ſmall tendinous end to the tendinous membrane, which coming from the noſtrils, is ſpread thro' the upper ſide of the ſoft palate. k the part where the right and left elevators are continued one to the other. l the lower part forming a diſtinct portion.
m The tendinous membrane, which coming from the noſtrils, is ſpread thro' the upper ſide of the ſoft palate.
n n The circumflex muſcle of the ſoft palate. See Fig. 15. h h. and 16. i i.
o o The ſmall hooks of the pterygoide proceſſes. See Fig. 16. p p.
p q r s t. p q r s t The ſtylopharyngei. q the tendinous beginning, r the part where it is cut off from the ſtyloide proceſs. s the upper and leſs part, t the lower and larger part.
From u to v are cut off parts of the common ends of the ſtylopharyngei and palatopharyngei, which run through the back part of the membrane of the pharynx.
w w Parts of the palatopharyngei which paſs through the ſoft palate, under the ends of the elevators of the ſaid palate. Thoſe parts are here removed which paſs above the foreſaid ends, n n. Fig 13.
x x Parts of the common ends of palatopharyngei, ſalpingopharyngei, and ſtylopharyngei, which deſcend through the ſides of the pharynx, are protuberant within the ſame, and form the poſterior arches which deſcend along the ſides of the fauces from the ſoft palate.
y z. y z Parts of the common ends of the ſtylopharyngei and palatopharyngei produced from the ſtylopharyngei; of which the part y runs within through the lateral ligament of the epiglottis, to the lateral edge of the epiglottis: z the part that is inſerted into the upper edge of the thyroide cartilage, betwixt its upper proceſs and the epiglottis.
a a The poſterior edges of the ſoft palate.
b The uvula.
c c The tonſils.
d The tongue.
e f The epiglottis. *f* The round body like a ligament.
g g The ſmall heads added to the arytenoide cartilages.
h h The arytenoide cartilages.
i k k The annular cartilage. *k k* the ſurface from whence ariſe the poſterior cricoarytenoidei.
l l m m The thyroide cartilage. *l* the inner part.
n n The ligaments which belong to the upper proceſſes of the thyroide cartilages from the ends of the horns of the os hyoides.
o o The ends of the os hyoides.

FIGURE XV.

Repreſents the next face of the muſcles, after the elevators of the ſoft palate, with the annular and arytenoide cartilages, and the additaments that are faſtened to them, are taken away.

a a The place from whence the back part of the pharynx is cut off.
b c d. b c d The Euſtachian tubes, as yet covered at b with the membrane that lines the inſide of the fauces, at c they are naked, that part of them having been covered by the elevators of the ſoft palate. d d the orifices by which they open laterally into the poſterior foramina of the noſtrils.
e e The lower oſſa ſpongioſa covered with the mucous membrane.
f f The cavities of the noſtrils.
g The partition of the noſtrils.
h i k. h i k The circumflex muſcle of the ſoft palate. i the tendon in which it ends. k the tendinous part of its beginning.
l The outer ſide of the pterygoide proceſs, which is alſo in the left ſide.
m m The ſmall hooks in thoſe proceſſes. See Fig. 16. p p.
n The aponeuroſes of the circumflex muſcles. See Fig. 16. m m n.
o o Parts of the upper conſtrictors of the pharynx cut off, which ariſe from the aponeuroſes of the circumflex muſcles of the ſoft palate.
p q q. p q q r Parts of the palatopharyngei which paſs through the ſoft palate under the ends of the elevators of the ſaid palate; at q q they paſs out from the aponeuroſes of the circumflexi; at r they are continued one to the other.
From s to s are cut off parts of the common ends of the ſtylopharyngei and palatopharyngei, which run through the back part of the membrane of the pharynx.

t t Parts of the common ends of the palatopharyngei, ſalpingopharyngei, and ſtylopharyngei, which deſcend through the ſides of the pharynx, are protuberant within the ſame, and form the poſterior arches which deſcend from the ſoft palate through the ſides of the fauces.

v w. v w Parts of the common ends of the ſtylopharyngei and palatopharyngei produced from the ſtylopharyngei; of which the part v runs inward through the lateral ligament of the epiglottis, at the lateral edge of the epiglottis; the part w is inſerted into the upper edge of the thyroide cartilage, betwixt its upper proceſs and the epiglottis.

x y z *a b*. x y z *a b* The ſtylopharyngei. y the tendinous beginning, cut off at z from the ſtyloide proceſs. *a* the upper and leſs part. *b* the lower and larger part.

c The uvula.

d d The poſterior margins of the ſoft palate.

e e The tonſils.

f The tongue.

g h i The epiglottis. *h* the round body like a ligament. *i* its origin from the inner part of the thyroide cartilage.

k k l m m n n o o The thyroide cartilage. *k k* the inner ſides. *l* the unequal protuberance. *m m* the lower proceſſes. *n n* the upper proceſſes. *o o* the protuberances in the external ſides at the roots of the upper proceſſes.

p p The ligaments which belong to the upper proceſſes of the thyroide cartilage from the ends of the horns of the os hyoides.

q q The ends of the horns of the os hyoides.

FIGURE XVI.

Follows immediately after the upper part of the laſt preceding figure, the portions of the upper conſtrictors of the pharynx, and the next adjacent parts of the palatopharyngei being here removed.

a a The place from whence the back part of the pharynx is cut off.

b c d. b c d The Euſtachian tubes, as yet covered at b d by the membrane which lines the inſide of the fauces, at c c they are naked in thoſe parts upon which lay the elevators of the ſoft palate. d d the orifices by which they open into the ſides of the poſterior foramina of the noſtrils.

e e The lower oſſa ſpongioſa covered with the mucous membrane.

f f The cavities of the noſtrils.

g The partition of the noſtrils covered with the mucous membrane.

h h The part from whence is cut the membrane which lines the inſide of the cavity of the noſtrils.

i k l m. i k l m n The circumflex muſcle of the ſoft palate. k the tendinous part of its beginning. l the tendon. m the aponeuroſis inſerted into the poſterior edge of the palate bones. n the conjunction of the aponeuroſes one with the other.

o p. o p The external ſides of the pterygoide proceſſes. p p their ſmall hooks.

FIGURE XVII.

Exhibits the open mouth and fauces, to ſhew the muſcles which appear to belong to the ſoft or moveable palate on the fore-ſide, after the inveſting membrane is taken off.

a a The gums.

b b The tonſils.

c c The poſterior edges of the ſoft palate, betwixt which is the uvula.

d d The fauces.

e The tongue.

f g. f g h i The conſtrictors of the iſthmus of the fauces, which in the part f paſs from the tongue to the palate before the tonſils. g the part that goes through the ſoft palate. h the place where they conjoin together, and afterwards ſmaller portions of them run into the uvula at i.

k k Parts of the palatopharyngei which run through the ſoft palate above the foreſaid conſtrictors, under the elevators of the ſoft palate.

FIGURE XVIII.

Exhibits the bottom of the foot in which are expreſſed all the aponeuroſes, muſcles, and ligaments, which lie immediately next to the common integuments.

A B C D E F G H The middle aponeuroſis of the ſole of the foot, on one ſide joined with the aponeuroſis that covers the abductor of the little toe, on the other ſide with that which covers the abductor of the great toe. B its origin from the protuberance of the calcaneum. C D E F G the five parts of it which belong to the toes, and which, at laſt, being ſplit at the ends, embrace the tendons, namely, of the long flexor of the great toe, and of the long and ſhort flexors of the other toes; from theſe portions alſo thin expanſions run out further through the body of fat, which is placed under the anterior ends of the metatarſal bones, at the roots of the toes; but theſe we have not added, to avoid obſcuring the figure. H the portion which joins with the aponeurſios that covers the great toe, and goes to the origin of the ſhort flexor of the great toe.

I K L M N The aponeuroſis that covers the abductor of the little toe. K its origin from the protuberance of the calcaneum. L a portion which it inſerts into the firſt head of the metatarſal bone of the little toe. M a portion that joins the middle aponeuroſis of the ſole of the foot, but is not always found to do ſo. N the portion which it gives to the beginnings of the ſmall flexor of the little toe and interoſſeous muſcle of the ſame toe.

O P The aponeuroſis that covers the abductor of the great toe. P its origin from the calcaneum.

Q R S The abductor of the great toe. R the tendon conjoined with the ligament S which belongs to the firſt bone of the great toe from the outer ſeſamoide bone, and, together with the ſaid ligament, is inſerted into that firſt bone.

T The ligament which ariſing from the outer ſeſamoide bone of the great toe belongs to the firſt bone of that toe whereinto it is inſerted, and conjoined with the tendon of the abductor of the great toe.

U V W Part of the ſhort flexor of the great toe belonging to the outer ſeſamoide bone, and inſerting itſelf into the ſaid ſeſamoide bone at V; at W joining itſelf to the tendon of the long abductor of the great toe. X part of the ſame flexor belonging to the inner ſeſamoide bone.

Y Z The common tendinous end of the ſhort flexor and abductor of the great toe with the tranſverſalis, inſerted into the inner ſeſamoide bone of that toe, and afterwards being conjoined with the ligament that goes to the firſt bone of the toe from the ſaid ſeſamoide bone, is therewith inſerted into that bone at Z.

a The ligament which ariſing from the inner ſeſamoide bone of the great toe, conjoins itſelf with the tendinous end of the abductor of the ſaid toe, and therewith belongs to the firſt bone of that toe into which it is inſerted.

æ æ b The tendon of the long flexor of the great toe, inſerted at b into the laſt bone of that toe.

c The ligament that confines the tendon of the long flexor of the great toe, at the joint of that toe, with its metatarſal bone.

d d Two ligaments which croſs each other, and confine the tendon of the long flexor of the great toe, where it runs along the bone of the firſt phalanx of that toe.

e f g h The lumbricales; e the firſt, f the ſecond, g the third, h the fourth.

i i i The tranſverſalis pedis.

k The ſecond interoſſeus of the firſt of the ſmall toes.

There is alſo a portion of the firſt interoſſeus of the other ſide to be ſeen betwixt the firſt lumbricalis and metatarſal bone of that toe with the bone or the firſt phalanx. This is too minute to admit of fixing a letter on it for the explanation; but Fig. 22. m. will help towards a better knowledge of it.

l The ſecond interoſſeus of the ſecond of the ſmall toes.

There is alſo a part of the firſt interoſſeus of this toe, betwixt the bone of the firſt phalanx and the ſecond lumbricalis. See Fig. 22. s.

m m The ſecond interoſſeus of the third of the ſmall toes.

There is alſo part of the firſt interoſſeus of this toe betwixt the third lumbricalis, the metatarſal bone, and the bone of the firſt phalanx of this toe. See Fig. 22. y.

n The ſhort flexor of the toes.

o The interoſſeus of the little toe; part of which is alſo preſent betwixt the fourth lumbricalis and bone of the firſt phalanx of this toe. See Fig. 22. *e*.

p The ſhort flexor of the little toe.

q r The abductor of the little toe. r the tendon inſerted into the bone of the firſt phalanx of the little toe.

s, as in this toe, ſo in the reſt of the ſmall toes, are repreſented the ligaments which confine the tendons of the long and ſhort flexors as they paſs near the anterior heads of the metatarſal bones.

t, as in this, ſo in the other ſmall toes, are exhibited the ligaments which confine the tendons of the long and ſhort flexors, about the middle of the bones of the firſt phalanx.

u, as in this firſt, ſo in the other ſmall toes, are ſeen the ligaments which confine the tendons of the long and ſhort flexors, about the bones of the ſecond internodes, or phalanx.

v w w The tendon of the ſhort flexor of the toes; w w the horns of it which belong to the bone of the ſecond order. By the ſide of this laſt tendon, next the great toe, is the tendon of the long flexor. The ſame are alſo in the reſt of the ſmall toes.

x One of the tendons of the long flexor of the toes inſerted into the third bone. A portion of the ſame tendon is alſo ſeen by the ſide of the ſhort flexor tendon, v, which lies next the great toe; as alſo betwixt the horns w w of that tendon. See Fig. 19. The ſame is likewiſe to be underſtood of the other ſmall toes.

FIGURE XIX.

Repreſents the firſt order of the muſcles in the ſole of the foot, after the aponeuroſes and moſt of the ligaments in the preceding figure are taken away.

A B C D E The abductor of the little toe compoſed of two parts A and B. C D the origin from the protuberance of the calcaneum, whence it is outwardly tendinous in the part where it adheres to, and is covered by, the aponeuroſis plantaris. E the tendon inſerted into the firſt bone of the little toe.

F G H I The abductor of the great toe. G its origin from the protuberance of the calcaneum, whence it is outwardly tendinous, and coheres in that part for a conſiderable length with the aponeuroſis that covers it. H the tendon which at laſt is conjoined with the ligament that belongs to the firſt bone of the great toe from the outer ſeſamoide bone of that toe, and is inſerted with the ſame ligament into that firſt bone.

K The ligament which ariſing from the outer ſeſamoide bone of the great toe, is inſerted into the firſt bone of that toe, and is conjoined with the tendon of the abductor of the great toe.

L M N O P Q R S T U V The ſhort flexor of the toes. M its origin from the protuberance of the calcaneum, whence it is outwardly tendinous in the part where it coheres for a conſiderable length from its origin with the middle aponeuroſis plantaris, ſo that it ſeems in a manner to ariſe from thence. N the portion belonging to the firſt of the ſmall toes: O its tendon which at laſt ends in the two horns P Q. R the portion belonging to the ſecond of the ſmall toes: S its tendon divided in the ſame manner towards its end into two horns. T the portion belonging to the third toe: U its tendon, in like manner ſplit, at its end, into two horns. V the tendon belonging to the fourth toe, at laſt, like the reſt, divided into two horns.

W A tendinous portion which ariſes from the lower protuberance of the cubiform bone, and ends in the origin of the ſhort flexor (a) of the little toe,

its interoſſeous muſcle Z, and in the ſecond interoſſeus of the third of the ſmall toes X.

X Y The ſecond interoſſeous muſcle of the third of the ſmall toes. Y the tendinous end inſerted into the firſt bone of that toe.
There is alſo a portion of the firſt interoſſeus of this toe, on the other ſide betwixt its firſt bone, the metatarſal bone, and the third lumbricalis. ſee Fig. 22. y.

Z The interoſſeous muſcle of the little toe whoſe end appears betwixt the fourth lumbricalis and the firſt bone of the ſaid little toe. See Fig. 22. *e*.

a b The ſhort flexor of the little toe. b its tendinous end inſerted into the firſt bone of the little toe.

c d e f The lumbricales: c the fourth. d the third. e the ſecond. f the firſt. See Fig. 20. Z X. W S.

g g h The tranſverſalis muſcle of the foot, h its tendinous origin. See Fig. 21. f.

i The ſecond interoſſeus of the ſecond of the ſmall toes.
Part of the firſt interoſſeus is alſo in the other ſide, betwixt the ſecond lumbricalis, the metatarſal bone and firſt bone of this toe. See Fig. 22. s.

k The ſecond interoſſeus of the firſt of the ſmall toes.
Part of the firſt is alſo on the other ſide of this toe, betwixt the firſt lumbricalis, the metatarſal bone, and bone of the firſt phalanx of this toe. See Fig. 22. m

l m One of the tendons of the long flexor of the toes, inſerted into the third bone m. Part of this tendon of the long flexor is alſo ſeen above, on that ſide of the tendon of the ſhort flexor which is next the great toe. The like tendon is alſo in the other ſmall toes. See Fig. 20. N O P Q.

n o The tendon of the long flexor of the great toe, inſerted into the laſt bone of that toe, o.

p The abductor of the great toe.

q q Part of the ſhort flexor of the great toe, belonging to the inner ſeſamoide bone of that toe.

r s t The common tendinous end of the ſhort flexor and abductor of the great toe, with the tranſverſalis pedis, inſerted at s into the inner ſeſamoide bone, at t conjoined with the ligament which belongs to the firſt bone of the toe from the inner ſeſamoide bone, and inſerted with that ligament into the ſaid bone.

u The ligament which belonging to the firſt bone of the great toe from the inner ſeſamoide bone, joins itſelf with that part of the common end of the ſhort flexor and adductor of the great toe, with the tranſverſalis pedis, which belongs to the adductor.

v Part of the portion which the middle aponeuroſis plantaris gives to the origin of the ſhort flexor of the great toe. See Fig. 18. H.

w x y Part of the ſhort flexor of the great toe, belonging to the outer ſeſamoide bone of that toe. x the part where it joins the tendon of the abductor of the gerat toe, y its inſertion into the ſeſamoide bone.

FIGURE XX.

Exhibits the ſecond order of the muſcles in the ſole of the foot, after the abductor of the little toe, moſt part of the abductor of the great toe, and the ſhort flexor of the toes are taken away.

A B The tendon of the long flexor of the toes: B the knot or induration where this tendon rubs againſt the calcaneum. C D E F G the muſcular head which joins the long flexor of the toes in the ſole of the foot, conſiſting of two portions diſtinct from the beginning C and D. The one part C ariſes from the calcaneum at E. The other part D, begins by a thin tendon F, ariſing from the calcaneum at G. H the portion that joins or continues the tendon of the long flexor of the toes to the tendon of the long flexor of the great toe. I K L M the four tendons into which it divides, with the head that joins it; which tendons belong to the four ſmall toes, and are in a manner ſplit longitudinally at N O P Q, being inſerted into the third or laſt bones, as at R.

S T V The firſt lumbricalis, T its origin from the firſt and ſecond tendon of the long flexor of the toes. V its tendon: from whence the tendons of the reſt may be underſtood.

W The ſecond lumbricalis.

X Y The third lumbricalis, Y its origin from the ſecond and third tendon of the long flexor of the toes.

Z a The fourth lumbricalis, a its origin from the third and fourth tendon of the long flexor of the toes.

b c d e The tendon of the long flexor of the great toe, increaſed at c by a portion received from the tendon of the long flexor of the toes, is then in a manner ſplit longitudinally at d, and is at laſt inſerted at e into the laſt bone of the great toe.

f g h The tendon of the tibialis poſticus. f its knot or turning which lies upon the head of the aſtragalus. g its inſertion below into the navicular bone. h its inſertion into the large cuneiform bone.

i k The two ends of the tendon of the tibialis anticus, one of which i is inſerted into the large cuneiform bone, the other k belongs to the metatarſal bone of the great toe.

l Part of the portion which the middle aponeuroſis plantaris gives to the beginnings of the ſhort flexor of the great toe. See Fig. 18. H.

m n The tendon of the abductor of the great toe cut off. n the end by which it joins the ligament from the outer ſeſamoide bone to the firſt internode of the great toe, in which bone it is inſerted.

o The ligament, which belongs to the firſt bone of the toe from its outer ſeſamoide bone conjoined with the end of the tendon of the abductor of the great toe.

p q r Part of the ſhort flexor of the great toe, which belongs to the outer ſeſamoide bone of the great toe. q the part where it joins the tendon of the abductor of the great toe. r its inſertion in the outer ſeſamoide bone.

s s Part of the ſhort flexor of the great toe, which belongs to the inner ſeſamoide bone of the great toe.

t t The adductor of the great toe.

u v w The common tendinous end of the ſhort flexor and adductor of the great toe, with the tranſverſalis pedis: v its inſertion into the inner ſeſamoide bone of the great toe, w its conjunction with the ligament which belongs to the firſt bone of the great toe from its inner ſeſamoide bone, and is inſerted with that ligament into the ſaid firſt bone of the great toe.

x The ligament which belongs to the firſt bone of the great toe from its inner ſeſamoide bone, and is conjoined with the tendinous end of the adductor of the great toe.

y The tendon of the peroneus brevis.

z *a b* The tendon of the long peroneus. *a* the knot or turning where it paſſes by a protuberance of the calcaneum. *b* another knot where it bends to the cuboide bone.

c d e The ligament which ariſing from the calcaneum *d*, inſerts itſelf into the eminence of the os cuboides, at which the tendon of the long peroneus bends itſelf. *e* its inſertion into the ſaid eminence.

f The tendinous part which ariſes from the bottom of the cuboide protuberance, and ends in the origin of the ſhort flexor and interoſſeus of the little toe, and ſecond interoſſeus of the third of the ſmall toes. *g* an excurſion of the ligament marked *c*, which joining itſelf to the tendinous part *f*, forms therewith the common tendinous part *h*, which joins the origins of the ſhort flexor and interoſſeus of the little toe, and both the interoſſei of the third of the ſmall toes, with that of the abductor of the great toe.

i k The ſhort flexor of the little toe, *k* its inſertion into the firſt bone of the little toe by its tendinous end.

l The interoſſeus of the little toe. Its tendinous end, which is inſerted into the firſt bone of this toe, appears betwixt the fourth lumbricalis and the firſt bone of this toe: See Fig. 22. *e*.

m n The ſecond interoſſeus of the third of the ſmall toes. *n* its tendinous end inſerted into the firſt bone of that toe.

o The firſt interoſſeus of the third of the ſmall toes, the tendinous end of which is inſerted into the bone of the firſt order of the ſame toe, and may be ſeen betwixt the third lumbricalis of the metatarſal bone, and the firſt internode of this toe. See Fig. 22. y.

p The tendinous end of the ſecond interoſſeus of the ſecond of the ſmall toes, inſerted into the firſt internode of the ſame toe.
On the other ſide of this toe lies the tendinous end of its firſt interoſſeus, betwixt the firſt lumbricalis, metatarſal bone, and firſt internode of this toe. See Fig. 22. s.

q The tendinous end of the ſecond interoſſeus of the firſt of the ſmall toes, inſerted into the firſt bone of the ſaid toe.
On the other ſide of this toe likewiſe is the tendinous end of the firſt interoſſeus betwixt the firſt lumbricalis, the metatarſal bone, and the firſt internode of this toe. See Fig. 22. m.

FIGURE XXI.

Repreſents the third order of the muſcles of the foot, having firſt taken away the muſcular head which joins the long flexor of the toes in the ſole of the foot, the tendons of the long flexor of the toes, the lumbricales and tendon of the long flexor of the great toe.

A the tendon of the ſhort peroneus.

B C D The tendon of the long peroneus. C its knot or turning where it is applied to the calcaneum. D the other knot where it bends to the cuboide bone. betwixt r and l are the portions inſerted into the large cuneiform bone. See Fig. 22. g h.

E F G H I The tendon of the tibialis poſticus, cut off at E. F the knot or turning by which it is applied to the head of the aſtragalus. G its inſertion below into the navicular bone. H its inſertion into the large cuneiform bone. I the portion which it inſerts to the third cuneiform bone, and then runs out to the ſecond and third metatarſal bone, giving a portion to the ſhort flexor of the great toe.

K L M M The ligament which ariſing from the calcaneum belongs to the cuboide bone, wherein it is inſerted at M M.

N The tendinous part which ariſes from the bottom of the protuberance of the cuboide bone, and ends in the beginning of the ſhort flexor of the little toe, the interoſſeus of that toes and the ſecond interoſſeus of the third of the ſmall toes. O the excurſion of the ligament marked K, which joining the tendinous part N, forms therewith the common tendinous part P, which joins the origins of the ſhort flexor and interoſſeus of the little toe, both the interoſſei of the third of the ſmall toes, and of the adductor the of great toe.

Q R The ſhort flexor of the little toe, inſerted by its tendinous end R into the firſt bone of the ſaid little toe.

S The interoſſeus of the little toe, whoſe tendinous end, near T, is inſerted into the bone of the firſt order.

U V The ſecond interoſſeus of the third of the ſmall toes. V its tendinous end inſerted into the bone of the firſt order.

W X The firſt interoſſeus of the third of the ſmall toes. X its tendinous end inſerted into the bone of the firſt order.

Y Z The ſecond interoſſeus of the ſecond of the ſmall toes. Z its tendinous end inſerted into the bone of the firſt order.

a b The firſt interoſſeus of the ſecond of the ſmall toes. b its tendinous end inſerted into the bone of the firſt order.

c d The ſecond interoſſeus of the firſt of the ſmall toes. d its tendon inſerted into the bone of the firſt order.

e The tendon of the firſt interoſſeus of the firſt of the ſmall toes, inſerted into the bone of the firſt order.

f g h i The tranſverſalis muſcle of the foot, g the part which ariſes from the capſule inveſting the joint of the third of the ſmall toes with its metatarſal

bone. h its tendinous origin. i its extremity by which it joins the common tendinous end of the adductor and ſhort flexor of the great toe.

k l m n The adductor of the great toe. l part of it in ſome meaſure divided from the reſt. m the tendinous part of its origin. n its tendinous end.

o p q r s Part of the ſhort flexor of the great toe which belongs to the inner ſeſamoide bone of that toe. p the tendon ariſing from the calcaneum q, part of which tendon goes into the beginning of this flexor. r the tendinous beginning of this part of the ſhort flexor ariſing from the middle of the cuneiform bone. s the origin of the tendinous end.

t u v The common tendinous end of the ſhort flexor and adductor of the great toe with the tranſverſalis pedis: u its inſertion into the inner ſeſamoide bone of the great toe. v its conjunction with the ligament which belongs to the firſt bone of the great toe from the inner ſeſamoide bone being inſerted into the ſaid firſt bone.

w The ligament which ariſes from the inner ſeſamoide bone of the great toe, and is inſerted into the firſt bone of that toe conjoined with the tendon of the adductor.

x Part of that portion of the middle aponeuroſis plantaris which goes into the origin of both parts of the ſhort flexor of the great toe.

y z *a* Part of the ſhort flexor of the great toe that belongs to the outer ſeſamoide bone of that toe, at z it joins the tendon of the abductor of the great toe: *a* its inſertion into the outer ſeſamoide bone of the great toe.

b c d The abductor of the great toe cut off, conjoined by its end *d* with the ligament which goes from the outer ſeſamoide bone of the great toe to its firſt internode in which they are inſerted together.

e The ligament which belongs to the bone of the firſt phalanx of the great toe from the outer ſeſamoide bone, and is conjoined with the tendon of the abductor of the great toe.

f g The two portions of the end of the tendon of the tibialis anticus: of which one, *f*, is inſerted into the large cuneiform bone: the other, *g*, belongs to the metatarſal bone of the great toe.

FIGURE XXII.

Exhibits the fourth and laſt order of the muſcles in the ſole of the foot, in order to which are taken away the tendon of the tibialis poſticus, the ligament which ariſing from the calcaneum belongs to the cuboide bone, the ſhort flexor of the little toe, the tranſverſalis of the foot, the abductor of the great toe, the ſhort flexor of the great toe, the ligaments which go from the ſeſamoide bones to the firſt phalanx of the great toe, and the end of the abductor of the great toe.

a The tendon of the ſhort peroneus.

b c d e f g h i The tendon of the long peroneus. c the knot or turning which is applied to the calcaneum. d the more conſiderable knot where this tendon bends at the eminence of the cubiform bone. e the end inſerted into the metatarſal bone of the great toe. f a portion going off from the tendon, and dividing into two parts g h, inſerted into the great cuneiform bone. i the portion going off the tendon, and inſerted into the ſecond metatarſal bone.

k l The two ends of the tendon of the tibialis anticus, the one of which, k, is inſerted into the large cuboide bone, the other, l, into the metatarſal bone of the great toe.

m n o The firſt interoſſeus of the firſt of the ſmall toes. n its origin from the ſecond metatarſal bone. o the tendon inſerted into the bone of the firſt order.

p q r The ſecond interoſſeus of the firſt of the ſmall toes q the tendinous beginning ariſing from the ſecond and third of the metatarſal bones. r the tendon inſerted into the bone of the firſt phalanx.

s t u The firſt interoſſeus of the ſecond of the ſmall toes. t its origin from the ſecond metatarſal bone. u the tendon inſerted into the bone of the firſt phalanx.

v w x The ſecond interoſſeus of the ſecond of the ſmall toes. z its origin from the third metatarſal bone. x the tendon inſerted into the bone of the firſt phalanx.

y z *a* The firſt interoſſeus of the third of the ſmall toes. z its origin from the fourth metatarſal bone. *a* the tendon inſerted into the bone of the firſt phalanx.

b c d The ſecond interoſſeus of the third of the ſmall toes. *c* its origin from the fourth metatarſal bone. *d* the tendon inſerted into the bone of the firſt phalanx.

e f g The interoſſeus of the little toe. *f* its origin from the fifth metatarſal bone. *g* the tendon inſerted into the bone of the firſt phalanx.

FIGURE XXIII.

Repreſents the articulation of the bones of the foot viewed from its bottom. This figure is added, that from thence may be underſtood the parts of the bones expreſſed in the other preceding figures of the foot; and it was the more neceſſary to add this view, as it could not be given in the figures of the ſkeletons.

A B C D E The os calcis. B the protuberance which forms the heel. C an eminence incruſted with a ſmooth cartilage which ſuſtains the tendon of the long peroneus. D an eminence, from the bottom of which ariſes the ligament K. Fig. 21. E a ſiuus or groove, through which paſſes the tendon of the long flexor of the great toe.

F G H The talus or aſtragalus. G H the lower head incruſted with a ſmooth cartilage, part of which head, G, belongs to the juncture with the calcaneum, but the part H is articulated by a ligament which paſſes under this head from the calcaneum to the navicular bone.

I K L The cuboide bone. K an eminence, by the ſide of which paſſes the tendon of the long peroneus. L a riſing tubercle incruſted with a ſmooth cartilage, on which lies the moſt conſiderable knot or turning of the ſaid tendon.

M N The navicular bone. N a riſing tubercle, into which is inſerted the tendon of the tibialis poſticus.

O P Q The great cuneiform bone. P an eminence, into which is inſerted the tendon of the tibialis poſticus. Q an eminence, into which is inſerted part of the tendon of the tibialis anticus, k, Fig. 22.

R The leſs cuneiform bone.

S T The middle cuneiform bone. T the protuberance from whence ariſes the tendinous beginning of the ſhort flexor of the great toe, r, Fig. 21.

U V W X The firſt bone of the metatarſus, belonging to the thumb. V the place into which is inſerted part of the tendon of the tibialis anticus, l, Fig. 22. W the ſurface into which is inſerted the tendon of the long peroneus, X the anterior head incruſted with a ſmooth cartilage.

Y Z The ſeſamoidal bones placed at the joint of the great toe with its metatarſal bone. Y the outer, Z the inner of them.

a f. b f. c f. d e f The metatarſal bones of the ſmall toes. a that of the firſt, b of the ſecond, c of the third, d e of the fourth, of which e is a riſing protuberance, f f f f the anterior heads incruſted with a ſmooth cartilage.

g h i. k l m The bones of the firſt order, g that of the great toe, h i k l m. thoſe of the ſmall toes, m the round head incruſted with a ſmooth cartilage; and the like is in the other bones of the toes.

n o p q r The bones of the ſecond order of the ſmall toes. r the round head incruſted with a ſmooth cartilage; as are alſo the other bones.

s t The laſt bone of the great toe; t the protuberance at the end; the like of which is alſo in the laſt or third bones of the ſmall toes.

u v w x The third or laſt bones of the ſmall toes.

FIGURE XXIV.

Gives an internal view of the muſcles ſeated under the ſternum, with the next adhering parts of the ribs or thorax.

a b c d e f g h i k l m n o p q r s t u v w The triangularis muſcle of the ſternum. a the head ariſing from the third rib, with a tendinous beginning b; c the origin from the cartilaginous part of the rib, d from the bony part. e the head ariſing from the fourth rib, with a tendinous beginning f; g the origin from the bony part of the rib, h from the cartilaginous part. i the head ariſing from the fifth rib, by a tendinous origin k; l the origin from the cartilaginous part of the rib, m from the bony part. n the common tendinous part of the two upper heads, which in ſome bodies is conjoined with the tendinous part of the lower head o, but in others is ſeparate; it is inſerted into the extreme cartilage p of the fourth rib, and into the os pectoris q betwixt the cartilaginous ends of the fourth and fifth rib, into the end of the cartilage of the fifth rib r, into the os pectoris s betwixt the extreme cartilages of the fifth and ſixth ribs, into the end of the cartilage of the ſixth rib t, and of the ſeventh u, into the bone of the enſiform cartilage v, and into the enſiform cartilage itſelf w.

x y z *a* Is a ſmall muſcle here correſponding to the triangularis ſterni, and found in ſome bodies. y its origin from the bony part of the ſecond rib, and from the cartilaginous part z. *a* its tendinous end inſerted into the cartilage of the third rib.

b c d e f g h The ribs: *b* the ſecond, *c* the third, *d* the fourth, *e* the fifth, *f* the ſixth, *g* the ſeventh, *h* the eighth. *i k l m m n n o o p* the cartilaginous ends of thoſe ribs.

q r ſ t The os pectoris. *q* the firſt and uppermoſt bone; *r* the ſecond which is in the middle; *ſ* the third and loweſt, which belongs to the enſiform cartilage. *t* the enſiform or pointed cartilage itſelf. We deſignedly paſs by the other particulars of this os pectoris, as well becauſe they do not relate to the preſent purpoſe, as becauſe they will be explained in our tables of the bones.

TABLES

OF THE

HUMAN

MUSCLES,

BY

BERNARD SIEGFRIED ALBINUS.

PART SECOND.

CONTAINING

The Muſcles of the particular Parts ſeparated from the Body.

A. Bell Sculpt.

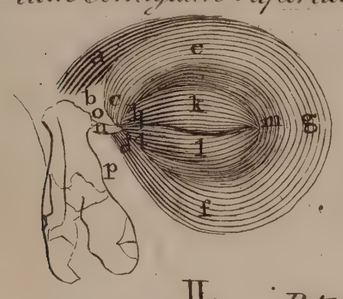
EDINBURGH:

Printed for ANDREW BELL ENGRAVER.

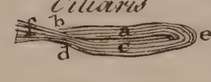
M, DCC, LXXVIII.

TAB. XI.

I.
Orbicularis palpebrarum cum Corrugatore supercilii.



II.
Ciliaris



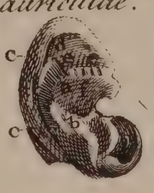
III.
Attolens Auriculae.

IV.
Helicis major, minor, Tragicus, Antitragicus.

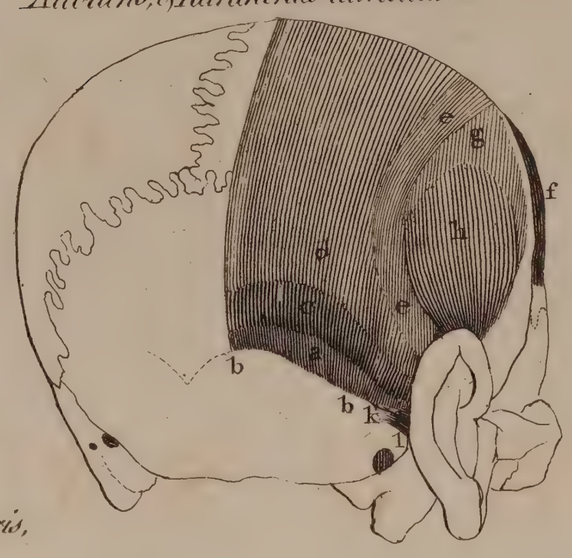
Retrahentes

Anterior

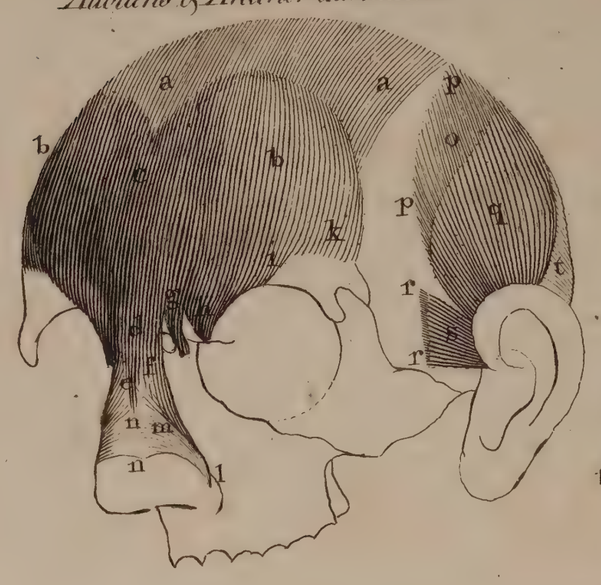
V.
Transversus auriculae.



VI.
Occipitalis cum Frontali, Attollens, & Retrahentes auriculae.



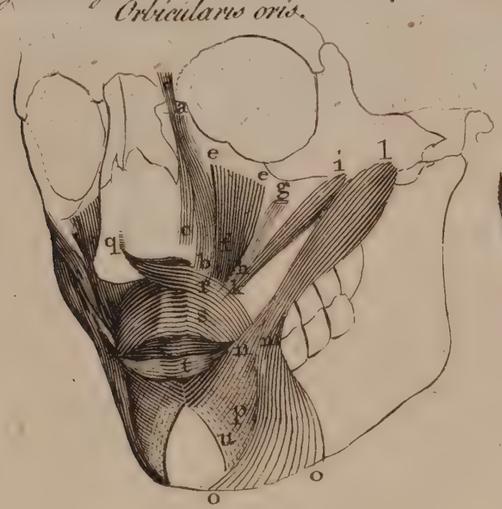
VII.
Frontalis cum Compressoribus narium, Attollens & Anterior auriculae.



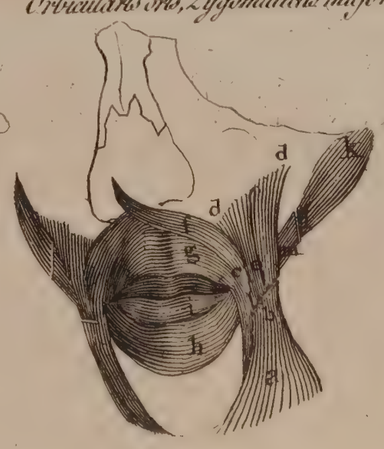
VIII.
Depressor alae nasi.

IX.
Depressores labii inferioris.

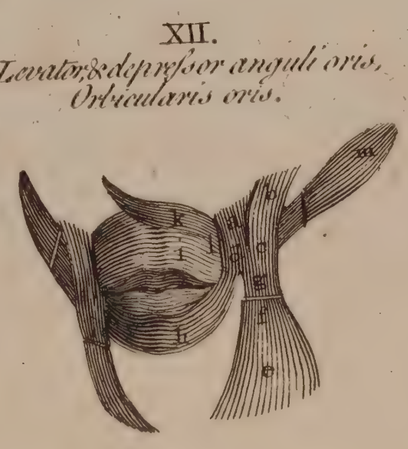
X.
Levator labii superioris alaeque nasi, Levator labii superioris, portio ab Orbitali palp. Zygomaticus minor, & major, Depressor anguli oris, Nasalis labii superioris, Orbicularis oris.



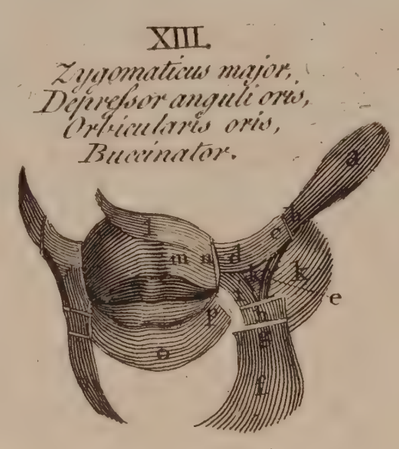
XI.
Levator, & Depressor anguli oris, Nasalis labii superioris, Orbicularis oris, Zygomaticus major.



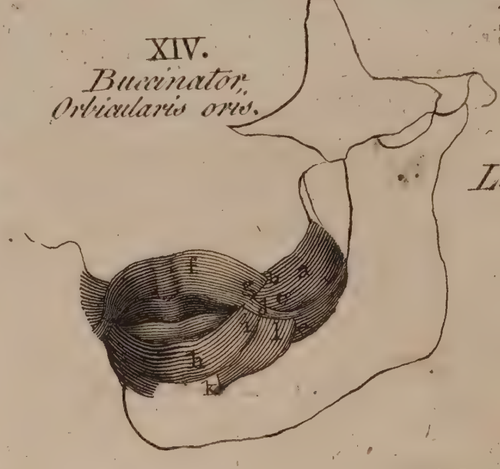
XII.
Levator, & depressor anguli oris, Orbicularis oris.



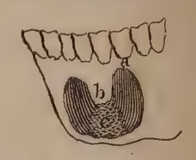
XIII.
Zygomaticus major, Depressor anguli oris, Orbicularis oris, Buccinator.



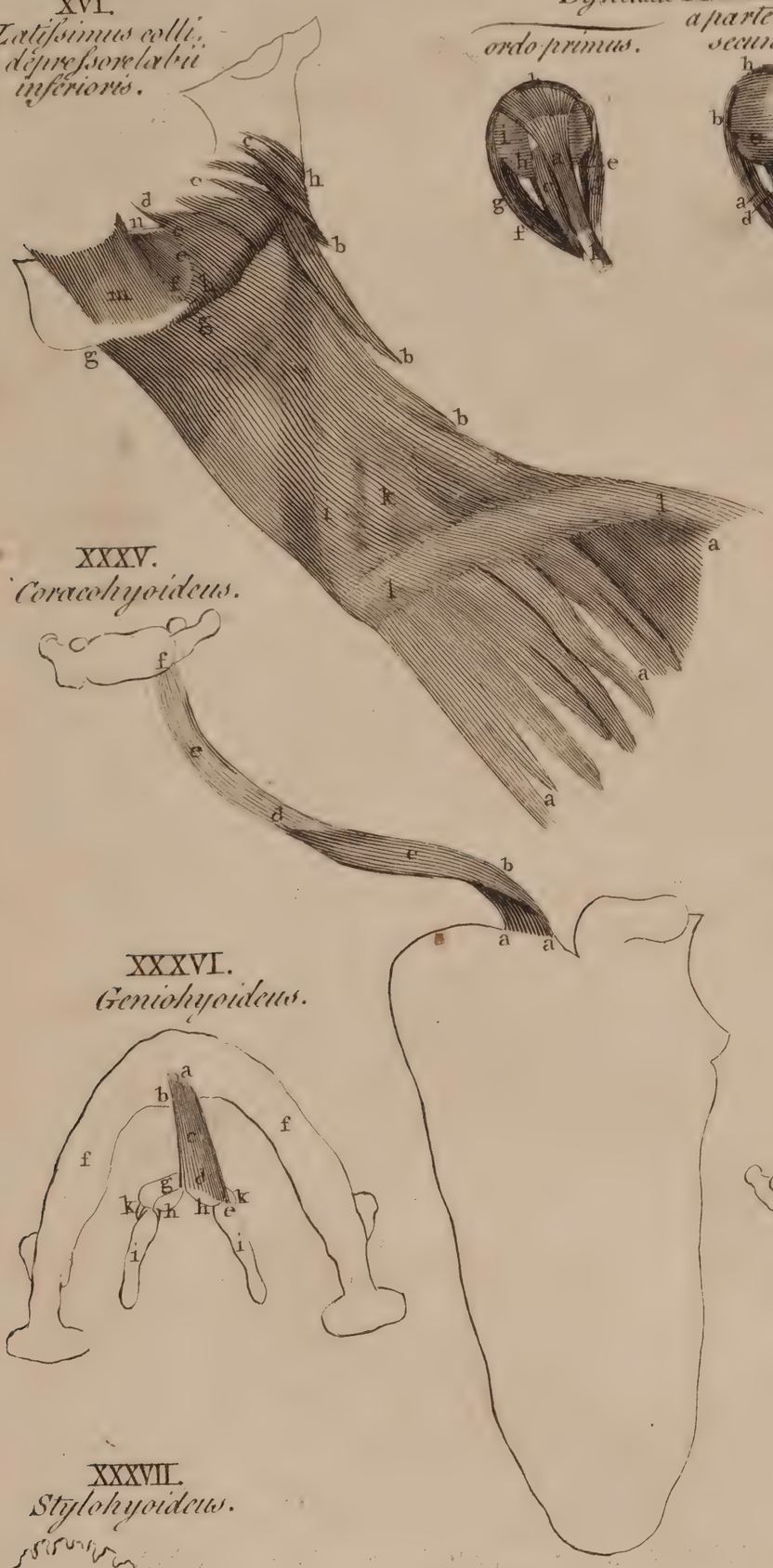
XIV.
Buccinator, Orbicularis oris.



XV.
Levatores menti.



XVI.
Latissimus colli, cum Depressore labii inferioris.



XVII.
Syntaxis Musculorum, qui in cavo osseo oculi collocati sunt a parte superiore, ordo primus.

XVIII.
secundus.

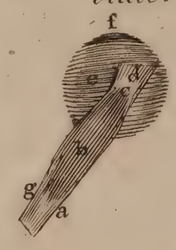
XIX.
Tertius.

XX.
Levator palpebrae superioris.

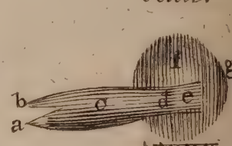
XXI.
Obliquus superior oculi.

XXII.
Rectus attollens oculi.

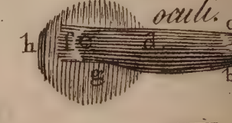
XXIII.
Rectus deprimens oculi.



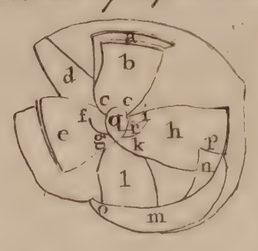
XXIV.
Rectus adducens oculi.



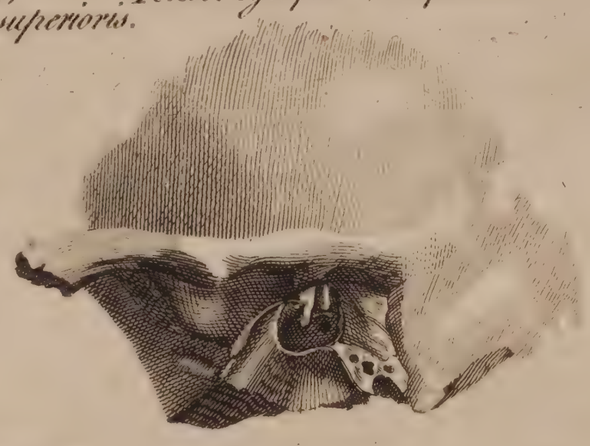
XXV.
Rectus abducens oculi.



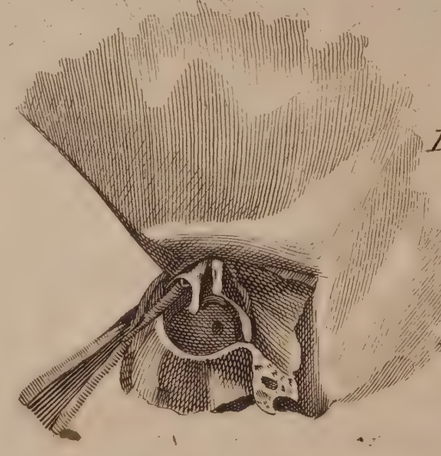
XXVI.
Omnes globi oculi, cum Levatore palpebrae superioris.



XXVII.
Laxator tympani, Externus mallei Tensor tympani, Stapedius.



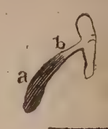
XXVIII.
Tensor tympani, Stapedius.



XXIX.
Laxator tympani.

XXX.
Laxator tymp

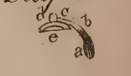
XXXI.
Externus mal



XXXII.
Tensor tymp

XXXIII.
Tensor tympan

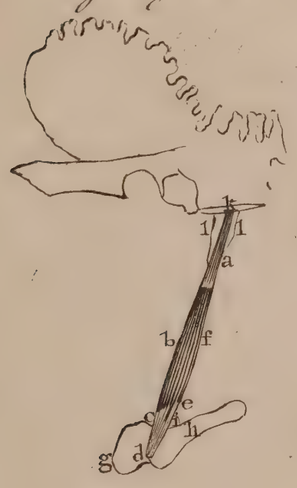
XXXIV.
Stapedius.



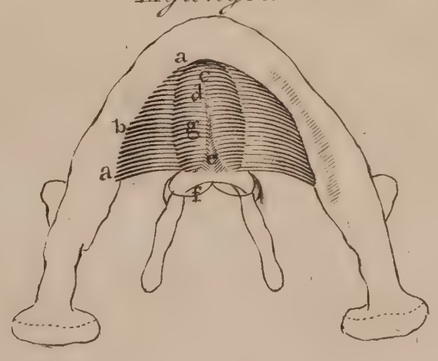
XXXV.
Coracohyoideus.

XXXVI.
Geniohyoideus.

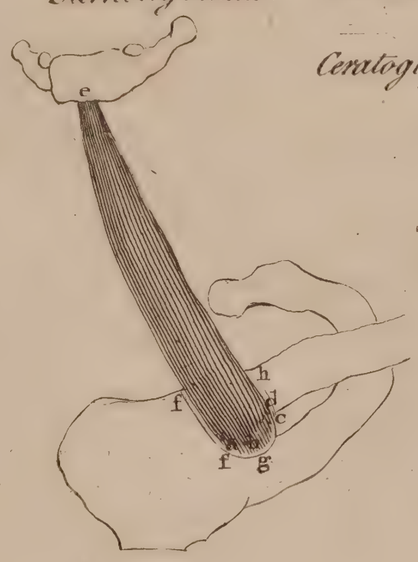
XXXVII.
Stylohyoideus.



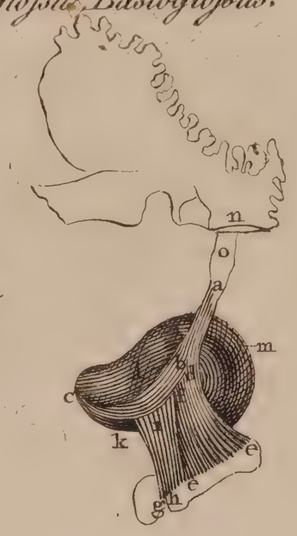
XXXVIII.
Mylohyoidei.



XXXIX.
Sternohyoideus.

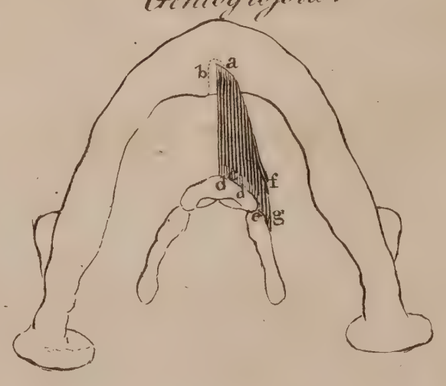


XL.
Styloglossus, Ceratoglossus, Basioglossus.

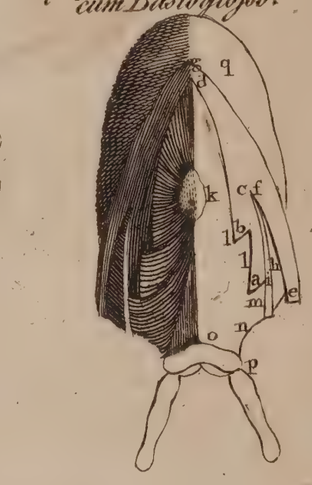


XLI.
Chondroglossus, Genioglossus, Lingualis.

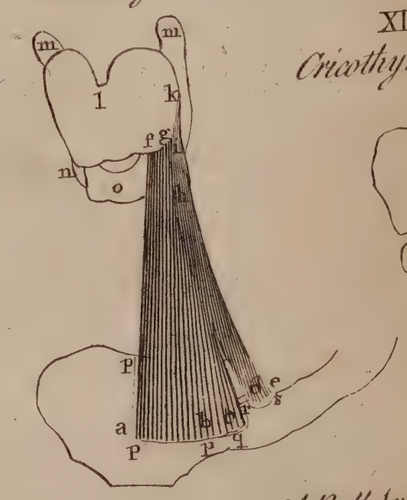
XLII.
Genioglossus.



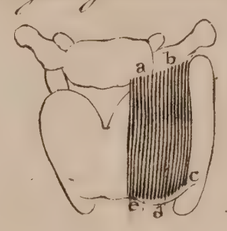
XLIII.
Lingualis, Genioglossus, Styloglossus Ceratoglossus cum Basioglosso.



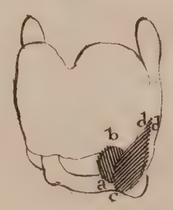
XLIV.
Sternothyreoideus.



XLV.
Hyothyreoideus.



XLVI.
Cricothyreoideus.



XLVII.
Cricothyreo

XLVIII.
Cricothyreoid

A. Bell Sculp.

THE

Eleventh Anatomical Table

OF THE

HUMAN MUSCLES

EXPLAINED.

IN the following Tables all the muſcles are exhibited ſeparate from the body, together with the bones to which they are affixed, or on which they lie contiguous, and ſuch other parts belonging to them as ſeemed neceſſary. They are all figured twice as large as in the preceding Tables, but in the ſame poſition, and in all other reſpects the ſame, ſo far as they are repreſented in the whole figures; but we muſt except a few of the muſcles, which required to be either drawn in a different poſition, or in the natural magnitude, of which we ſhall advertiſe the reader in its proper place.

The figures of the bones, and other parts, being almoſt every where the out-lines only, are either ſufficiently intelligible of themſelves, or are ſo from the tables of the skeleton and bones; for which reaſon we have added an explanation to only a few of them.

The Muſcles of the Eye-lids, Circumference of the Eye and Eye-brow.

To theſe add the *Frontales*, Fig. 7.

FIGURE I.

Repreſents the orbicular muſcle of the eye-lids, with the corrugator of the eye-brow.

Becauſe the corrugator of the eye-brow is ſo conjoined with the orbicularis of the eye lids, that it may be reckoned a part of it, we have therefore repreſented them together.

a The corrugator of the eye-brow going to the upper and inner part of the orbicularis. From which corrugator is formed the outer margin of the orbicularis that paſſes along the leſs angle of the eye, and on the cheek.

b Its origin from the os frontis, betwixt the eye-brows and from the head of the eye-brow, by one broad origination.

The ſyſtematic connection of this is ſeen in the head of Tab. II. a b. In the firſt muſcular table its origin does not appear, as being concealed under the frontalis.

c d e f g h i k l m The orbicularis muſcle of the eye-lids.

c The thicker part of the upper origin, by which it ſprings as well from the os frontis, immediately above the fore part of the os unguis, as from the adjacent part of the upper jaw-bone. But the origination itſelf could not be here repreſented, as one may eaſily conceive, by conſulting Tab. I. of the ſkeleton.

d The thicker part of the lower origin, by which it ariſes in the greater canthus from the lower part of the ligament n; but more eſpecially beneath from the edge of the bony orbit of the eye, which is formed by the naſal proceſs of the upper jaw-bone. But here alſo the origination from the bone could not be repreſented. See Tab. I. of the ſkeleton.

e f g The thicker part occupying the circumference of the eye, that is, the eye-brow e, a large part of the cheek f, and from the leſſer angle even to the temple g, round which angles the fibres are continued.

h The thinner part of the upper origin, by which it ſprings from the upper part of the ligament n.

i The thinner part of the lower origin, by which it ſprings from the lower part of the ligament n.

k l The thinner parts which are ſpread over the eye-lids, and which ariſe from the ligament n, hy the originations h, i; from whence the fibres meet in acute angles beyond the leſſer canthus at m, where they croſs each other and are interwove.

The ſyſtematic connection of this orbicularis is ſeen in the head of Tab. I. m m n o o p q r; where, in the eye-brow, and near the greater canthus, it is covered by the frontalis d e f g.

n The ligament which is extended tranſverſely from the upper jaw-bone even with the meeting of the eye-lids in the greater canthus.

The ſyſtematic connection of this ligament is ſeen in the head of Tab. I. s. and of Tab. II. g. in the head.

o The os frontis. See Tab. I. of the ſkeleton.

p The naſal proceſs of the upper jaw-bone. See Tab. I. of the ſkeleton.

FIGURE II.

The Ciliaris Muſcle.

a The part which occupies the margin of the upper eye-lid, ariſing at b from the ligament f.

c The part ſpread on the edge of the lower eye-lid, and ariſing alſo at d from the ligament f.

e The continuation of thoſe two parts round the leſſer canthus.

The ſyſtematic connection of the ciliaris is ſeen in the head of Tab. I. hh.

f The ligament which is extended tranſverſely, according to the meeting of the eye-lids, from the upper jaw-bone to the ſaid meeting of the eye-lids in the greater canthus.

Muſcles of the External Ear.

To theſe add the *Attollens* and *Retrahens*, Fig. 6.; the *Attollens* and *Anterior*, Fig. 7.

FIGURE III.

Repreſents the inner ſide of the attollens, anterior, and retractive muſcle of the external ear.

a b c c The attollens.

a The thin tendinous beginning.

b The fleſhy part.

c c The inſertion of the tendinous end into the upper and fore part of the protuberance which is in the back of the cartilage of the outer ear, where it forms outwardly the cavity that lies betwixt the legs of the antihelix.

The anterior fibres incline more backward than the poſterior ones do forwards.

Add to this Fig. 6. g h, and Fig. 7. o p p q.

d The eminence or protuberance on the back of the cartilage of the outer ear, where it forms externally the cavity that lies betwixt the legs of the antihelix.

e f g The anterior muſcle.

e The tendinous beginning.

f The fleſhy part paſſing into a tendinous end that is inſerted at g into the back of that eminence of the helix which divides the concha, running thro' the ſame.

Add to this Fig. 7. r r s.

h i k l m The retrahent muſcles.

h The tendinous beginning of the upper retrahent.

i The tendinous beginning of the middle retrahent, which is here the largeſt, and comes the furtheſt.

k The common fleſhy belly of the upper and middle retrahent, as I found it in the body from whence this figure was taken, and in ſome others. This fleſhy belly goes into a tendinous end, which is inſerted into the lower part of the back of the upper of thoſe cavities of the outer ear, into which the concha is divided by the eminence of the helix.

m The lower retrahent as it was found in this body, inſerted into the back

of the lower of thoſe cavities of the outer ear, into which the concha is divided by the eminence of the helix running through it.

Add to theſe Fig. 6. i k l.

FIGURE IV.

Repreſents the greater and leſs helical muſcles, with the tragicus and anti-tragicus.

a b The greater helical muſcle ariſing by a tendinous origin from the upper part of the outer ſide of the acute proceſs æ of the helix.

b The extremity here inſerted, as in ſome bodies, outwardly into the helix; and in others running along the ſurface of the elevator of the outer ear.

The ſyſtematic connection of this muſcle is ſeen in Tab. I. *H.* in the head, and in Tab. IX. n. in the head.

c The leſs helical muſcle aſcending near the helix d e, on the fore part of the outer ear, where the concha has an inciſure or notch, the one end being fixed below the ſaid notch, the other above it.

The ſyſtematic connection is ſeen in the head of Tab. I. *X.* and in Tab. IX. o. in the head.

f The tragicus ariſing from the middle of the outer ſide of the cartilage of the concha g, near the tragus, and terminating in the upper part of the tragus and adjacent part of the concha.

The ſyſtematic connection of the tragicus is ſeen in the head of Tab. I. *L.* and Tab. IX. p. in the head.

h k k The antitragicus, ariſing at h from the outer part of the cartilage of the antitragus i, where it is moſt protuberant; inſerted by a tendinous end k k into the edge of the concha l, in the angle of the notch that is in the cartilage of the outer ear behind the antitragus, at the bottom of the helix.

The ſyſtematic connection is ſeen in the head of Tab. I. *P.* and in Tab. IX. q. in the head.

FIGURE V.

Tranſverſus auriculae.

a b c c d The part belonging to the antihelix, the fibres of which part are longer than the reſt. a b its tendinous origin from the poſterior part of the back of the upper cavity of the concha. Inſerted by a tendinous extremity into a hollow on the back of the antihelix c c, and a ſmall part of it into the protuberant back of the ſcapha d.

a e e f The part belonging to the ſcapha, compoſed of ſhorter fibres, more looſely conjoined, and for a conſiderable length divided as into ſeveral leſs diſtinct, and almoſt tendinous muſcles. It ariſes from the upper part of the back of the ſuperior cavity of the concha a f; is inſerted into the lower part of the protuberance in the back of the ſcapha e e.

This, from its ſituation, could not be repreſented in the preceding tables.

Muſcles of the ſkin of the head, forehead, eye-brows, and back of the noſe.

FIGURE VI.

Exhibits the occipitalis with the frontalis; the elevator and retrahents of the outer ear.

a b b c d e e The occipitalis.

a The tendinous origin ſpringing from the bone of the occiput b b, and from that of the temple.

c The fleſhy part.

d e e The aponeuroſis in which the fleſh ends. e e the part of that aponeuroſis which is raiſed into a convexity by the ſubjacent temporal muſcle.

The ſyſtematic connection is ſeen in the head of Tab. V. a b c d d, and in Tab IX. a b c d in the head.

f The frontalis.

The ſyſtematic connection of which is ſeen in the head of Tab. V. h.

See Fig. 7 a a b, &c.

g h The attollens auriculam, or elevator of the outer ear.

g The tendinous beginning of a rounding figure, gradually ſent off by thin ſcattered fibres from the aponeuroſis epicranii e e.

h The fleſhy part, paſſing under the outer ear.

Add to this Fig. 7. o p p q, and Fig 3. a b c c.

The ſyſtematic connection is ſeen in the head of Tab. V. at f g, and Tab. IX. g h in the head.

i k l The retrahent muſcles paſſing under the outer ear.

i The ſuperior retrahent, and k the middle one, both ariſing tendinous from the occipital bone.

l The lower retrahent, ariſing alſo from the occipital bone.

Add to theſe Fig. 3. h i k l m.

The ſyſtematic connection is in Tab. V. m n o in the head, and in Tab. IX. k l m in the head.

FIGURE VII.

The frontales and compreſſors of the noſe, with the elevator and anterior muſcle of the outer ear.

a a b b c d e f g h i k The frontales.

a a The aponeuroſis of the frontales where they are conjoined with the occipitals.

b b The fleſhy parts, beginning by oval tips, and conjoined together into one on the upper and middle part of the forehead c.

d The part running over the glabella and back of the noſe, on which at laſt it forms a thin aponeuroſis, that unites with a like thin expanſion from the compreſſors of the noſe, with which it is interwove at e, and continued into at f.

g The portion that joins the outer part of the beginning of the elevator of the upper lip and wing of the noſe, from whence it is cut off.

h The point that inſerts itſelf into the os frontis in the greater angle of the eye, a little above the ligament by which the greater canthus is tied to the upper jaw-bone, n Fig. 1.

i The place where the fibres bend inward towards the greater angle.

k The part that ends at the orbicularis of the eye-lids. There, in ſome bodies, we obſerve fibres which join the corrugator near the temples, and therewith ſurround the leſſer canthus.

The ſyſtematic connection is ſeen in the head of Tab. I. a a b b c d d e e f f g g h h i k l.

l m n n The compreſſors of the wings of the noſe.

l The origination, ſpringing from the outer part of the root of the wing of the noſe.

m The part where it is extenuated in form of a membrane, which joins with e like membranous extremity of the frontales f, is interwove therewith at e, and riſes with thin fibres over the back of the noſe, till thoſe fibres of the right and left ſide intermix at n n.

The ſyſtematic connection is ſeen in the head of Tab. I. t u, where it is partly covered by the elevator of the upper lip and wing of the noſe, x y.

o p p q The elevator of the outer ear.

o The tendinous beginning by thin and ſcattered fibres, p p going off from the epicranius.

q The fleſhy part paſſing under the outer ear. Add to this Fig. 6. g h, and Fig. 3. a b c c.

The ſyſtematic connection is ſeen in the head of Tab. I. *C D.*

r r s The anterior muſcle of the outer ear.

r r The tendinous beginning, ſpringing, by thin ſcattered fibres from the epicranius, almoſt in the middle above the os jugale.

s The fleſhy part going under the outer ear.

Add to this Fig. 3. e f g.

The ſyſtematic connection is ſeen in the head of Tab. I. Z. Alſo in Tab. V. k in the head, and in Tab. IX. i in the head.

t The occipital part of the aponeuroſis.

The ſyſtematic connection of which is ſeen in Tab. I. a.

Muſcles of the Noſe.

Here add the frontalis and compreſſor, Fig. 7. and elevator of the upper lip and wing of the noſe, Fig. 10.

FIGURE VIII.

The depreſſor of the wing of the noſe.

a a b The beginning by which it ariſes from the upper jaw-bone, outwardly where the gums cover the ſockets of the dentes inciſores a a, and canini b.

c c Its inſertion round the root of the wing of the noſe.

d Its inſertion under or within the noſtril, from the ſeptum naſi, where that coheres with the lip to the wing of the noſe.

The ſyſtematic connection is ſeen in the head of Tab. III. I m; where it is in part covered by the orbicularis of the mouth n. Alſo in Tab. II. F. in the head; where it is in a great meaſure covered by the naſalis of the upper lip G, and the orbicularis of the mouth H.

Muſcles of the mouth and lips, ſome of which belong to the gena or upper part of the cheek; ſome to the bucca or lower and lateral part of the cheek, and others, to the ſpaces at the ſides of the chin.

To theſe add the latiſſimus colli or quadratus gena, Fig. 16.

FIGURE IX.

The depreſſors of the lower lips.

a a. a The origin from the lower part of the outer jaw, a little above its lower edge at the ſide of the chin.

b b The extremities which belong almoſt to the whole length of the lower lip, and terminating where it begins to be red.

c The part where they croſs each other.

Add to this Fig. 16. m f.

The ſyſtematic connection is ſeen in the head of Tab. II. K K L M, and then in Tab. I. M M N in the head, in which laſt the greater part of this muſcle is covered by the depreſſors of the corners of the mouth Q Q, and the thin fibres L L, which ſeem to come partly from the greater zygomatics, and in part from the depreſſors of the angles of the mouth.

d e Part of the orbicular muſcle of the mouth that is in the red margin of the lips. This is added, to ſhew in what manner the depreſſors of the lower lip terminate in the ſaid orbicularis of the lower lip.

FIGURE X.

Repreſents the common elevator of the upper lip and wing of the noſe. The proper elevator of the upper lip. A portion joining the upper lip from the orbicular muſcle of the eye-lids. The greater and leſs zygomaticus. The depreſſor of the corner of the mouth. The naſalis of the upper lip. The orbicularis of the mouth.

Theſe muſcles are all figured together, becauſe they cohere ſo ſtrictly one to the other.

a b c The *elevator belonging to the upper lip and wing of the noſe.*

a The origin, from the naſal proceſs of the upper jaw-bone near the greater canthus of the eye, beginning tendinous.

b The extremity which runs through the upper lip near the ſide of the noſe, and being gradually extenuated over the fore part of the naſalis of the upper lip, at laſt vaniſhes in the ſaid lip. As it paſſes near the wing of the

noſe, it uſually inſerts fibres into the upper part of the ſaid wing near the cheek; which fibres could not be here repreſented.

c The thin portion which it ſend through the fat to the wing of the noſe, towards which it gradually vaniſhes.

d The portion which joins the outer part of this muſcle from the frontalis, g Fig. 7. from whence it is cut off.

The *ſyſtematic connection* is ſeen in the head of Tab. I. w x y. where its beginning is partly covered by the orbicularis of the eye-lids, q.

e e f *The elevator of the upper lips.*

e e Its origin, which is ſingle, from above the hole that is beneath the bony orbit of the eye, in the direction of the lower edge of the ſaid orbit.

f Its extremity which runs through the upper lip, over that part of the orbicularis of the mouth that is formed by the naſalis of the upper lip, and after being gradually extenuated, at length diſappears.

Its *ſyſtematic connection* is ſeen in the head of Tab. I. z A, where its origin is covered by the orbicularis of the eye-lids q m.

g h *The muſcular portion that joins the upper lip from the orbicularis of the eye-lids.*

g The part that is cut off from the ſaid orbicularis.

h Its end, which on one ſide ſoon joins to the elevator of the upper lip; and afterwards, on the other ſide, to the leſs zygomaticus, being extenuated with thoſe muſcles through the upper lip in which it ends.

The *ſyſtematic connection* is ſeen in the head of Tab. I. B.

i k The *leſs zygomaticus.*

i Its origin from the fore part of the outer ſide of the os jugale, a little below the middle of that ſide,

k Its end extenuated, by which it runs through the upper lip, above the orbicularis of the mouth, like the preceding muſcles.

The *ſyſtematic connection* is ſeen in the head of Tab. I. C. where its beginning is covered by the orbicularis of the eye-lids, m.

l m n The *greater zygomaticus.*

l Its origin from the outer ſide of the os jugale, a little above its lower edge, in the place where its poſterior proceſs begins.

m The place where it joins and enters into the depreſſor of the corner of the mouth.

n Thin fibres which run firſt through the outſide of the depreſſor of the corner of the mouth, and then upon the depreſſor of the lower lip, from the corner of the mouth to the oppoſite ſide, thorugh the adjacent part of the lower lip.

To this add Fig. 13. a b c d e.

The *ſyſtematic connection* is ſeen in the head of Tab I. E F G: where its origin is partly covered by the orbicularis of the eye-lids, m.

o o m The *depreſſor of the corner of the mouth.*

o o The origin, from the outer part of the lower edge of the mandible, at the ſide of the chin.

m Its extremity by which it is continued outwardly to the greater zygomaticus.

Add to this Fig. 11. a b c, Fig. 12. e f g, and Fig. 13. f g h i.

The *ſyſtematic connection* is ſeen in the head of Tab I. Q R R S.

p Small fibres that ſeem to come off from the depreſſor of the angle of the mouth, and mixing with the like fibres n, from the greater zygomaticus, they run through the outer ſide of the depreſſor of the lower lip.

The *ſyſtematic connection* is ſeen in the head of Tab. I. L.

q r *The naſalis of the upper lip*, which may be reckoned an acceſſory head or portion of the orbicularis of the mouth.

q The beginning ariſing from the tip of the cartilage in the globe of the noſe, from whence, with its fellow, it forms the greater part of the ſaid globe, and from thence being continued along by the edge of the ſeptum of the noſe, it is extended out of its coverings down to the partition of the lip.

r The part where it joins the orbicularis of the mouth.

Add to this, Fig. 11. f.

The *ſyſtematic connection* is ſeen in the head of Tab. II. G. And in Tab. I. H in the head; in which laſt, as in the preſent figure, it is partly covered by the end of the elevator of the upper lip, and wing of the noſe y, the elevator of the upper lip, A, the portion coming from the orbicularis of the eye-lids B, and the leſs zygomaticus C.

s t *The orbicular muſcle of the mouth.*

t The part which is in the red margin of the lips.

Add to this Fig. 11. g h i i, Fig. 12. h i, Fig. 13. m o, and Fig. 14. f g h i k l.

The *ſyſtematic connection* is in Tab. I. I K K in the head: where, as here, it is covered in the lower lip by the greater zygomatics L L, and depreſſors of the lower lip L Q. L Q.

u The depreſſor of the lower lip, here covered in a great meaſure by the depreſſor of the corner of the mouth o o m: alſo by thin fibres p, detached in a manner from thence; and the excurſion of a thin portion of the greater zygomaticus n, as in the ſyſtematic connection of this muſcle in the head of Tab. I. M N, covered Q L.

See Fig. 9. a a b c.

The right muſcles are eaſily underſtood from theſe left.

FIGURE XI.

Exhibits the greater zygomaticus. The depreſſor and elevator of the corner of the mouth. The naſalis of the upper lip. The orbicularis of the mouth.

k l m *The greater zygomaticus.*

l The outer part here cut off, which is continued into the depreſſor of the corner of the mouth, and runs through the lower lip. See Fig. 10. m o.

m A thin portion which runs behind the continuation of the depreſſor and elevator of the corner of the mouth, c Fig. 13.

a b *The depreſſor of the corner of the mouth.*

b The outer part here cut off, which continues itſelf to the greater zygomaticus. See Fig. 10. o o m.

c The part which goes into the naſalis of the upper lip, and from thence into the outer part of the orbicularis of the mouth, where it ſurrounds the upper lip at the corner of the mouth. This part of the depreſſor lies under the fibres of the greater zygomaticus n, Fig. 10. which is here removed.

Add to this Fig. 12, e f g: and Fig. 13. f g h i.

d d e *The elevator of the corner of the mouth*, being here, from its origin, a kind of biceps.

d d Its origin from the ſmall excavation in the fore part of the upper jaw, betwixt the firſt grinding teeth, and the hole that is below the bony orbit of the eye.

e The part by which it is continued to the depreſſor of the corner of the mouth.

Add to this fig. 12. a b c d.

The ſyſtematic connection is ſeen in the head of Tab. II. B C, and then in the head of Tab. I. D D; where it is covered by the outer part of the greater zygomaticus G, which continues itſelf to the depreſſor of the corner of the mouth, and runs through the lower lip: is alſo covered by the leſs zygomaticus C, with the portion from the orbicularis of the eye-lids joining the upper lip, B, and the elevator of the upper lip z A.

f *The naſalis of the upper lip*, naked: which joins itſelf to the orbicularis of the mouth in the upper lip, and is continued to the depreſſor of the corner of the mouth, c.

See Fig. 10. q r.

The ſyſtematic connection is ſeen in Tab. II. G in the head.

g h i i *The orbicularis of the mouth.*

g The part that is in the upper lip: and its continuation to the depreſſors of the corner of the mouth at c.

h The part which is in the lower lip.

i i The parts which are ſeated in the red margin of the lips.

Add here Fig. 12. h i, Fig. 13. m. o, and Fig. 14. f h i k l.

The *ſyſtematic connection* is in the head of Tab. III. n o p p q r s. Alſo in Tab. II. H I I. in the head, where in the lower lip it is covered by the depreſſors of the ſaid lip K K M. And in Tab. I. in the head, I K K: where in the lower lip it is covered by the depreſſors of that lip L Q. L Q, and by the greater zygomatics L L.

FIGURE XII.

Exhibits the elevator and depreſſor of the corner of the mouth; and the orbicularis of the mouth.

a b c d The *elevator of the corner of the mouth.*

a b The part where it is a kind of biceps at its origin.

c Its continuation to the inner part of the depreſſor of the corner of the mouth.

d The portion that joins the outer part of the orbicularis of the mouth, where that bends itſelf round the lower lip.

See Fig. 11. d d e.

e *The depreſſor of the corner of the mouth.*

f The place from whence the outer part of the depreſſor is cut off, which partly continues itſelf to the greater zygomaticus, m Fig. 10. and b Fig. 11.; it alſo partly joins the orbicularis of the mouth, c Fig. 11.

g The inner part which is continued to the elevator of the corner of the mouth.

See Fig. 10. o o m.

h i *The orbicularis of the mouth.*

h The part which is in the lower lip; and which has a continuation to the elevator of the corner of the mouth d.

i The part which is in the lower lip.

See Fig 11. g h i i.

k The naſalis of the upper lip. See Fig. 11. f.

l The place where the orbicularis of the mouth is cut off, and that part of it removed which covers the elevator of the corner of the mouth in Fig. 11.

k l m The greater zygomaticus, as in Fig 11. k l m.

FIGURE XIII.

Repreſents the greater zygomaticus; the depreſſor of the corner of the mouth; the orbicularis of the mouth; and the buccinator.

a b c d e The greater zygomaticus.

b The place where the outer part is cut off, that continues itſelf to the depreſſor of the corner of the mouth, and runs through the lower lip: as in Fig. 11. l.

c A thin portion which runs behind the continuation of the depreſſor and elevator of the corner of mouth: being the ſame with m in Fig. 11. From hence, at

d It joins chiefly the outer part of the buccinator, and with that goes to the orbicularis of the mouth, forming afterwards a part of the upper lip: while

e Another portion, is incurvated downwards, and continued to the inner part of the depreſſor of the corner of the mouth.

f g h i The depreſſor of the corner of the mouth.

g The place from whence the outer part is cut off, as in Fig. 12. f. which outer part is continued to the greater zygomaticus, m Fig. 10, and b Fig. 11. and it partly joins the orbicularis of the mouth, c Fig. 11.

h The inner part cut off, which is continued to the elevator of the corner of the mouth, g Fig. 12.

i The portion which joins the inner part of the orbicularis of the mouth in the upper lip.

k k The buccinator. See Fig. 14. a, &c.

l The naſalis of the upper lip, k Fig. 12.

m Part of the orbicularis of the mouth which is in the upper lip, i Fig. 12.

n The place where it is cut off, as at l, in Fig. 12.

o Part of the orbicularis of the mouth that is in the lower lip, h Fig. 12.

p The place where it is cut off, and where it is outwardly joined by a part of the elevator of the corner of the mouth, d Fig. 12.

FIGURE XIV.

Exhibits the buccinator, and the orbicularis of the mouth.

a b c d e The buccinator.

b A portion which goes into that part of the orbicularis of the mouth that is in the upper lip.

c The portion which goes into that part of the orbicularis of the mouth that is in the lower lip.

d A muſcular portion of the buccinator that goes to the upper lip, and there joins the inner part of the orbicularis of the mouth.

e The place where the buccinator continues itſelf to the muſcular portion or appendix k l, that joins to the orbicularis of the mouth.

See Fig 13. k k, and add, Fig. 23. Tab. XII.

The *ſyſtematic connection* of the buccinator is ſeen in the head of Tab. III. v w x y z. And then in Tab. II. z in the head; where part of it is covered by the elevator of the corner of the mouth B, and the depreſſor E; and part lies hid behind the maſſeter r. Then in Tab. I. T in the head; where it is alſo covered by the elevator of the corner of the mouth D, the depreſſor Q S, and lies concealed behind the maſſeter V; and is finally covered by the greater zygomaticus E G, and the latiſſimus colli or quadratus genæ *d c c.*

f g h i The orbicularis of the mouth.

f The part which is in the upper lip.

g The place from which is cut off the depreſſor of the corner of the mouth which goes into the outer part of the orbicularis, where that ſurrounds the upper lip, near the corner of the mouth c, Fig. 11.

h Part of the orbicularis in the lower lip.

i The part that goes under the portion d, and joins the buccinator. But outwardly it receives part of the elevator of the corner of the mouth, d Fig. 12. which is here taken off.

k l The portion or appendix that joins the orbicularis of the mouth, ſpringing from the lower jaw.

k Its origin from the outer part of the lower jaw, beneath the protuberant ſocket of the canine tooth.

l The place where it alſo joins the buccinator.

Add here, Fig. 11. g h i i, and f, Fig. 12. h i d, and k, and Fig. 13. m o i and l.

The ſyſtematic connection of the orbicularis is ſeen in Tab. III. t u in the head; where its firſt beginning is covered by the elevator of the chin *b*. And in Tab. II. where it lies betwixt the depreſſor of the lower lip K L, in the head, and part of the depreſſors of the corner of the mouth E, where it is alſo covered by them both, and what part appears naked, is in Tab. I. covered by the depreſſor of the corner of the mouth Q R R S in the head.

Muſcles of the Chin.

FIGURE XV.

Repreſents the elevators of the Chin.

a The beginning ariſing from the fore part of the lower jaw, immediately beneath its upper edge from the ſocket of the lateral inciſive tooth, and extending from thence on one ſide to the ſocket of the middle inciſive, and on the other ſide to the ſocket of the canine tooth.

b The place where they are incurvated towards each other, partly continuing, and partly intermixing their fibres in the chin.

c The fibres which they intermix with the fat of the chin.

Their ſyſtematic connection is in Tab. III. *b b c d* in the head where they are covered at their origin by the orbicularis of the mouth r. And in Tab. II. N O in the head; where the greater part lies under the depreſſor of the lower lip K K. Finally, in Tab. I. O P in the head; where alſo the greater part lies under the depreſſor of the lower lip M M.

Muſcles of the mouth, lower lip, adjacent cheek, ear, and ſkin of the neck which is extended from below the cheek down to the breaſt and ſhoulder.

FIGURE XVI.

Repreſents the latiſſimus colli, with the depreſſor of the lower lip.

a a a, &c. The latiſſimus colli, or platyſma myoides.

a a a Its origin compoſed of thin, and in a great meaſure ſcattered faſciculi; by which it ariſes upon the breaſt below the clavicle, and upon the ſhoulder.

b b b Faſciculi or portions, which in ſome people join this muſcle from the ſide of the neck.

c c Scattered bundles of fibres, by which it ends and diſappears in the cheek.

d A portion that is ſtretched over the outer part of the depreſſor of the corner of the mouth, towards the ſaid corner.

e e A thin part that goes under the depreſſor of the corner of the mouth, with which it runs and adheres.

f A portion which it gives to the depreſſor of the lower lip.

g g The place where it is inſerted into the lower jaw beneath the origin of the depreſſor of the corner of the mouth.

h h The protuberance or riſing of the lower jaw, which it here paſſes over.

i k The protuberance of the ſternomaſtoideus i, and cleidomaſtoideus k which it covers.

l l The protuberance of the clavicle.

The *ſyſtematic connection* is ſeen in Tab. I. *O*, &c. in the neck.

m The depreſſor of the lower lip. See Fig. 9. a a b c.

n The depreſſor of the corner of the mouth here cut off.

Muſcles of the upper Eye-lid and Globe of the Eye.

FIGURE XVII.

Repreſents the ſyſtematic connection of the muſcles which are placed in the bony cavity of the left eye, viewed from the upper part, with the tarſus or cartilaginous edge of the upper eye-lid, the globe of the eye, the optic nerve, and cartilage of the ring or pulley belonging to the upper oblique muſcle.

a The elevator of the upper eye-lid. See Fig. 21. From its origin it lies partly under the obliquus ſuperior. See Fig. 21.

b The tarſus of the upper eye-lid.

c The rectus attollens, a great part of which lies under the elevator of the eye-lid. See Fig. 28.

g The rectus deprimens. See Fig. 18. d d, and Fig. 19. i k.

f The rectus abducens. See Fig. 18. a b, and Fig. 19. a b c d. Its extremity or inſertion lies partly under the elevator of the upper eye-lid: See Fig. 18. at its origin it lies under the rectus attollens; and alſo under the optic nerve: See Fig. 18.

d The obliquus ſuperior with the cartilage of the ring, round which it bends its tendon. See Fig. 22. The tendon at its end lies under the elevator of the upper eye-lid and rectus attollens. See Fig. 22.

e The rectus adducens lying under the obliquus ſuperior. See Fig. 18. e and Fig. 19. e f g h.

h Obliquus inferior. See Fig. 19. l l m.

i The globe of the eye. See Fig. 18. g.

k The optic nerve, cut off. See Fig. 18. i.

The beginning of the obliquus ſuperior, of the elevator of the upper eye-lid, and rectus attollens ſurround the optic nerve above; as that of the rectus abducens, deprimens, and adducens, ſurround it below, See Fig. 20.

FIGURE XVIII.

The primary or upper muſcles of the figure laſt preceding being taken away, (namely, the elevator and tarſus of the upper eye-lid, the rectus attollens, and the obliquus ſuperior, with the cartilage of its ring or pulley) the preſent figure exhibits the next order or appearance of them.

a b The rectus abducens. b the tendon inſerted into the ſclerotica. The thicker part of its origination lies under the optic nerve. See Fig. 19. c.

c The rectus abducens. The thicker head of which lies under the optic nerve. See Fig. 19. f.

d d The rectus deprimens. See Fig. 19. i k.

e f The obliquus inferior. See Fig 19 l l m.

e The broad extremity of the ſaid obliquus attached to the ſclerotica on the outer ſide of the globe of the eye, betwixt the optic nerve and the middle ſphericity of the eye that comes betwixt the ſaid nerve and the cornea.

g h The globe of the eye. h the cornea.

i The optic nerve.

FIGURE XIX.

Exhibits the ſame muſcles as the eighteenth figure preceding, after the globe of the eye and optic nerve are taken away.

a The rectus abducens, c its principal head which is tendinous from the beginning. See Fig. 26. a. b the leſſer head which is tendinous. See Fig. 26. c. d the tendon in which it terminates. See Fig. 18. a b.

e The rectus adducens f the principal head, the greater of which is tendinous. See Fig. 25. a. g the leſſer head which is tendinous. See Fig 25. b. h the tendon in which it terminates. See Fig. 18 c.

i The rectus deprimens, which at its origin lies under the rectus abducens a, and the adducens e, k the tendon in which it terminates. See Fig. 18. d d.

l l The obliquus inferior. m its tendinous origin. See Fig. 18. e f.

FIGURE XX.

Exhibits the ſyſtematic connection of the muſcles belonging to the eighteenth figure, with their lower ſide turned up to the view.

a The rectus adducens, c the larger head, the greater part of which is tendinous. See Fig. 25. a. b the tendon in which it terminates. See Fig. 18. c, and Fig. 19. e.

d e f The rectus abducens. e the leſſer head which is tendinous. See Fig. 26. c. f the tendon in which it terminates. See Fig. 18. a, and Fig. 19. a.

g g The rectus deprimens. See Fig. 24. Fig. 18. d d, and Fig. 19. i k.

h The obliquus inferior. i the tendinous origin. Its extremity goes under the rectus abducens d. See Fig. 18. e f, and Fig. 19. l l m.

k l The globe of the eye. l the cornea.

m The optic nerve.

FIGURE XXI.

Exhibits the elevator of the upper eye-lid.

a a The tendinous origination, which adheres to the origin of the rectus attollens, and together with that ariſes from the upper and next adjacent inner part of the foramen or hole in the multiform or ſphenoidal bone, through which the optic nerve enters the bony orbit or cavity of the eye; and below it alſo coheres with the hard coat or vagina that contains the optic nerve, by ſmall tendinous portions, reſembling an aponeuroſis or tendinous excurſion.

b The fleſhy part.

c The aponeuroſis by which it terminates in the cartilaginous edge of the upper eye-lid, called the tarſus.

d The tarſus of the upper eye-lid.

e e The globe of the eye.

f f The optic nerve.

The ſyſtemetic connection is ſeen in Fig. 17. a; where its origin lies partly under the beginning of the obliquus ſuperior d.

Add to this alſo Fig. 27. a.

FIGURE XXII.

Exhibits the obliquus ſuperior, vel trochlearis.

a The tendinous origin by which it ſprings from the anterior, upper, and lateral part of the edge of the hole through which the optic nerve enters; it alſo coheres below with the vagina of the optic nerve by a ſort of tendinous excurſion.

b The fleſhy belly.

c The tendon which at d bends round the cartilage of the ring or pulley through which it paſſes: afterwards it runs back to the upper part of the globe, near which it grows broader and thinner as it advances, inſerting itſelf at laſt obliquely into the ſclerotica e, in the upper ſide of the outer and poſterior quarter of the globe, if we divide the ſame longitudinally and tranſverſely, through the middle of its upper ſide.

f The cartilage of a ſort of ring or pulley which is fixed to the os frontis under the eye-brow, near the inner corner of the eye; through which paſſes the tendon of the obliquus ſuperior.

The ſyſtematic connection appears in Fig. 17. d; where the tendon runs firſt under the elevator of the upper eye-lid, and then under the rectus attollens. See Fig 27. d.

g h The globe of the eye. h the cornea.

i The optic nerve.

FIGURE XXIII.

The rectus atollens.

a a The tendinous beginning which at firſt coheres with the elevator of the upper eye-lid, and together with that ariſes from the inner ſide of the upper part of the optical foramen: alſo from the edge of the multiform or ſphenoidal bone that is betwixt the optical hole and the hole that immediately follows it: beneath it alſo adheres to the covering of the optic nerve by ſmall tendinous portions like an aponeuroſis.

b The fleſhy belly.

c The tendinous furface that makes the beginning of the tendon d, whoſe extremity is inſerted into the ſclerotica.

The ſyſtematic connection is ſeen in Fig. 17. c; where it is partly covered by the elevator of the upper eye lid a. Add to this Fig. 27. b c c.

e f The globe of the eye. f the cornea.

The optic nerve.

FIGURE XXIV.

The rectus deprimens, with its lower ſide upwards.

a The tendinous origin, cohering in ſome meaſure with the covering of the optic nerve, and ariſing from the lower part of the bony portion that divides the optical foramen from that which follows immediately after it, and lies oppoſite the ſame bony cavity of the eye. I have alſo obſerved a ſmall portion ariſing from the ligament that goes from the edge of the lower part of the optical foramen, where it looks towards the hole that immediately follows after it, to the oppoſite edge of the ſaid foramen, where it is round, near the beginning of the ſlit in which its lower edge ends.

b The fleſhy belly.

c The tendinous ſurface by which the tendon d begins here, and has its end inſerted into the ſclerotica.

The ſyſtematic connection is ſeen in Fig. 20. g g: and Fig. 19. i k, where at its origin and upper part it is covered by the rectus adducens e, and the abducens a. Add here Fig. 18. d d, Fig. 17. g, and Fig. 27. l.

e f The globe of the eye. f the cornea.

g The optic nerve.

FIGURE XXV.

A lateral view of the rectus adducens.

a The thick head which is tendinous and ariſes from the lower part of the optical hole, and the next adjacent ſide of it that is towards the noſe. It alſo coheres in ſome meaſure with the covering of the optic nerve.

b The ſlender head, which is alſo tendinous, and coheres at its origin with the elevator of the upper eye-lid and rectus attollens, alſo with them to the obliquus ſuperior; likewiſe with them it ariſes from the optical foramen, and coheres with the covering of the optic nerve.

c The fleſhy belly.

d The tendinous ſurface by which the tendon e begins here, having its end inſerted into the ſclerotica.

The ſyſtematic connection is ſeen in Fig. 17. e; where its greater part lies under the obliquus ſuperior d, and at its origin under the elevator of the upper eye-lid. Next ſee Fig. 18. c, Fig. 19. e, and Fig. 20. a. Add alſo Fig. 27. e f g.

f g The globe of the eye. g the cornea.

FIGURE XXVI.

A lateral view of the rectus abducens.

a The thicker head, tendinous at its beginning, which ariſes, firſt with the rectus deprimens, from the lower part of the optical foramen near the outer ſide; and from thence it is continued in its lower part from the ligament i, and where that ligament ends, the reſt of its lower part (b, here cut of) ariſes from the neareſt part of the edge of the foramen that follows next after the optical hole. And this head coheres in ſome meaſure with the vagina of the optic nerve.

c The ſmaller tendinous head which at firſt coheres with the rectus attollens, ariſing with that from the optical foramen, and coheres with the vagina of that nerve.

d The fleſhy belly.

e The tendinous ſurface by which the tendon f here begins, its end being inſerted into the ſclerotica.

The ſyſtematic connection appears in Fig. 17. f. Fig. 18. a. Fig. 19. a. Fig. 20. d, to which add Fig. 27. h i k.

g h The globe of the eye. h the cornea.

i The ligament which ariſes from the ſide of the lower part of the foramen by which the optic nerve enters where the optical hole is oppoſite to the other that follows next below it, and from thence it belongs to its oppoſite margin of that foramen where it is round, near the lower edge of the beginning of the ſlit in which it ends.

FIGURE XXVII.

Exhibits a perpendicular ſection of all the muſcles of the eye with the elevator of the upper eye-lid, contained in the bony cavity of the eye, and viewed in the fore part. The fore parts of the recti, upper obliquus, and elevator of the eye-lid, being here cut off.

This figure differs from that in the IVth table, as I have alſo found it vary in other ſubjects.

a The elevator of the upper eye-lid. The origination of which could not be repreſented becauſe of the rectus attollens. See Fig. 21. a a.

The ſyſtematic connection is ſeen in Tab. IV. a b b in the head; but with its fore part cut off, in Tab. II. c d in the head: which fore part lies behind the orbicularis of the eye-lids Tab. I. o in the head.

b The rectus attollens ariſing at c c from the upper part of the optical hole, and from the edge of the multiform bone that lies in the middle betwixt the optical foramen, and the other foramen that immediately follows after it below. Add alſo Fig. 23. a a.

The ſyſtematic connection is ſeen in Tab. IV. e f in the head; where the fore part is cut off: and in Tab. III. e in the head; which in Tab. II. lies behind the elevator of the upper eye-lid, c d in the head.

d The obliquus ſuperior: whoſe origination (lying behind the beginnings of the rectus adducens, the attollens, and elevator of the eye-lid) could not be here repreſented. Add Fig. 22. a.

The ſyſtematic connection is ſeen in Tab. IV. c d in the head, where the fore part is cut off: and in Tab. III. c d in the head; which there goes behind the rectus attollens e, and the part that here appears naked, lies behind the elevator of the upper eye lid, Tab. II. c d in the head.

e f g The rectus adducens, f the ſmaller head ariſing from the upper part of the external ſide of the optical foramen, where at its origin it coheres with the rectus attollens elevator of the upper eye-lid, and the obliquus ſuperior. Add Fig. 19. g. and Fig. 25. b.

g The thicker head, ariſing from the lower part of the optical foramen and from the neareſt ſide of it next the noſe. Add here Fig. 19. f. and Fig. 25. a.

Betwixt the thicker head and the optic nerve paſſes a ſmall artery from the internal carotid.

The ſyſtematic connection is ſeen in the head of Tab. IV. g h, where the fore part is cut off: and in Tab. III. f. in the head.

h i k The rectus abducens, i the ſmall head ariſing from the edge of the multiform bone that lies betwixt the optical foramen and that which follows juſt below it: and by this head it coheres with the beginning of the rectus attollens. Add Fig. 19. b, and Fig 26. c.

k The thicker head from the lower part of the optical foramen, near the external ſide. Add here Fig. 19. c. and Fig. 26. a b.

Betwixt theſe heads the trunk of the ſixth pair of nerves of the brain enters and paſſes along the bony orbit or cavity of the eye, as does alſo the trunk of the third pair, and the branch it gives to the rectus attollens.

The ſyſtematic connection appears in Tab. IV. i l in the head; where its fore part is cut off, and in Tab. III. g in the head.

l The rectus deprimens; whoſe origination could not be here ſhewn, as it lies under the beginnings of the adducens and abducens g k. See Fig. 24. a.

The ſyſtematic connection appears in Tab. IV. m n in the head; where the fore part is cut off: and in Tab. III. h in the head.

m n o p The obliquus inferior. m its outer part, n its inner part. o its tendinous beginning, ariſing at the bottom of the orbit of the eye, near its edge from the upper jaw bone, betwixt the ſuture, proper to that bone in this place, and the os unguis. Add here Fig. 19. l l m.

p The end cut off from the globe.

The ſyſtematic connection is ſeen in Tab. IV. o p q in the head: and in Tab. III. i k in the head; where its end goes under the rectus abducens g.

q The foramen by which the optic nerve enters.

r The foramen that follows immediately after the optical hole.

Muſcles of the malleus, ſtapes, and membrane of the tympanum.

Theſe could not be repreſented in any of the views of the preceding tables, In this table, on account of their ſmallneſs, they are exhibited in their natural magnitude.

FIGURE XXVIII.

Repreſents the muſcles of the internal ear, together with the ſmall bones of hearing, and the temporal bone, in their natural poſitions; alſo part of the multiform or ſphenoidal bone.

a The laxator tympani, ariſing from the upper part of the edge of the tympanum, near the end of the auditory paſſage, from the place to which the membrane of the tympanum adheres. It is inſerted into the handle of the malleus, near the root of its ſhorter proceſs. See Fig. 30.

b c d The externus mallei.

b The origination from the outer part of the acute proceſs, which the laſt angle of the multiform bone ſends out betwixt the os ſquamoſum and petroſum.

c The fleſhy belly a little protuberant.

d The tendon which enters the ſlit s that is left at the end of the ſuture of the os ſquamoſum and petroſum; and afterwards it goes on through the ſame

ns as holds the longeſt and ſlendereſt leg of the malleus, to that part of the bony extremity which contains the auditory paſſage, and affixes itſelf to the whole length of that proceſs. See Fig. 31.

Juſt above e appears the tendon of the tenſor tympani coming out of the ſmall opening of the bony channel in which it is contained. See Fig. 29. d: and Fig. 32.

Juſt below i is the tendon of the ſtapedius (paſſing out of the little opening in the neck of the cavity in which the ſtapedius itſelf is contained) running to the ſtapes. See Fig. 29. f. and Fig. 34.

k The tympanum.

n The bony channel that contains the tenſor tympani. See Fig. 29. s.

o The neck of the little cavity that contains the ſtapedius.

p Part of the auditory paſſage left entire, which lies in the os ſquamoſum and mammillare.

q The place from whence part of the auditory canal is cut off, and which is formed by the os petroſum: r the place where the ſame is cut off from the os ſquamoſum.

s A cleft or ſlit left at the end of the meeting or union of the os ſquamoſum and petroſum, which meeting or commiſſure is here covered by the external muſcle of the malleus; and by this cleft enters the externus mallei.

Above the ſaid cleft s, in which the tendon d is conſpicouus, in order to make it ſo conſpicuous, that ſinus is cut and laid open longitudinally which is contained in that part of the bony extremity that holds the auditory paſſage; that ſinus through which the malleus extends its longeſt and ſlendereſt proceſs, and along which the tendon paſſes that belongs to the externus mallei, and is inſerted into the ſaid proceſs.

t The os ſquamoſum.

u u The os petroſum.

v Part of the multiform bone. W the ſharp proceſs which the laſt angle of the multiform bone ſends out betwixt the os ſquamoſum and petroſum.

x The foramen, out of which paſſes the third branch of the fifth pair of nerves of the brain.

The malleus, incus, ſtapes, feneſtra, and aqueduct, are pointed out in the figure next following.

FIGURE XXIX.

Repreſents the muſcles called tenſor tympani and ſtapedius, with the ſmall bones of hearing, and the temporal bone in their proper ſituations; alſo part of the ſoft portion of the Euſtachian tube. The laxator tympani and externus mallei being here taken off.

a b c d The tenſor tympani.

a The very thin tendinous beginning, ariſing at b from the upper part of the Euſtachian tube, where that tube looks towards the baſis of the ſkull, and is of a cartilaginous nature, hard by the hole of the multiform bone that admits arteries to the dura mater, under the ſcale of the multiform bone which is connected to the os petroſum at the innner ſide of the ſaid hole.

c The fleſhy part where that paſſes through the beginning of the bony canal which is but half a canal; from whence it goes on through the ſaid canal, and its tendon being got out of the opening of the ſaid canal near d, bends itſelf round the ſaid opening, and then goes to its inſertion into the handle of the malleus, below its ſlendereſt proceſs, where the ſaid handle lies towards the bottom of the tympanum oppoſite the membrane. See Fig. 32. and 33.

e f The ſtapedius.

e The belly lying in the little cavity of the os petroſum, which is fixed in the tympanum below the lower part of the Fallopian aqueduct, and ariſing from thence all the way from its origination. f the tendon which ariſing in the cavity, paſſes afterwards out of its round mouth or opening, and ſo ſoon as it is got out bends itſelf and then goes ſtraight to the back part of the head of the ſtapes into which it inſerts itſelf. Add here Fig. 28. i: and ſee Fig. 34.

g The incus.

h The malleus. See Fig. 32. d e f g.

i The ſtapes, with its baſis reſting on the oval feneſtra or aperture. See Fig. 34. d e.

k The aqueduct of Fallopius; part of which alſo appears betwixt the malleus and incus.

l The fore ſide of the little cavern or cavity which contains the ſtapedius, projecting within the tympanum longitudinally from the bottom of the cavern to its opening that is cut off.

m Part of the os petroſum cut off, where the auditory paſſage here ends. It is cut off down to the poſterior part of the little cavern that contains the ſtapedius; and this part of the bone is thick.

Therefore, betwixt l and m the ſmall cavern is laid open by cutting out the intermediate bone, that the ſtapedius might thus be entirely viewed.

n The feneſtra rotunda, or round opening.

o Part of the os petroſum cut off down to the bony part of the Euſtachian tube.

p The os ſquamoſum cut off. See Fig. 28.

All that is bony betwixt the two parts o and p is here removed, that the canal r r s, and the muſcle c, might be entirely viewed.

q The place from whence the ſcale of the os petroſum is cut off, which meeting with the os ſquamoſum, divides the tympanum in this place from the cavity of the ſkull.

r r s The canalis oſſeus, here at its origin but half a canal r r, afterwards compleat or entire s, (but in ſome bodies it is all the way but half a canal), which is fitted to receive the tenſor of the tympanum partly above the bony part of the Euſtachian tube, and partly in the upper and fore part of the tympanum over againſt the membrane of the tympanum.

t u The bony part of the Euſtachian tube. u its opening into the tympanum.

v v w Part of the Euſtachian tube which is very much of the nature of a cartilage. x x x x the places from whence the membranous part is cut off. y a portion of the membranous part that is cut off in a ſtraight courſe to the end of the tube. v v the external parts of the portion which is of a cartilaginous nature: w the inner ſide thereof, forming a large concavity of the tube.

z Part of the os petroſum belonging to the cavity of the ſkull.

a The concavity of the tympanum.

b b The place from whence part of the auditory paſſage is cut off, formed by the os petroſum, as at q q in Fig. 28.

c That part of the auditory paſſage cut off which is a continuation of the os ſquamoſum, as at r in Fig. 28.

d Part of the auditory paſſage entire, which is contained in the os ſquamoſum and mammillare.

e The os petroſum.

FIGURE XXX.

The Laxator tympani.

a The laxator tympani inſerted into the handle of the malleus near the root of its ſhorter proceſs.

The ſyſtematic connection is in Fig. 28. a, where the poſition is the ſame, and natural.

Concerning the malleus, See Fig. 32. d e f g.

FIGURE XXXI.

The externus mallei.

a The fleſhy belly.

b The tendon, inſerted into the whole length of the longeſt and ſlendereſt proceſs of the malleus.

The ſyſtematic connection is in Fig. 28. b c d, where the poſition is the ſame, as here.

Concerning the malleus, See Fig. 32. d e f g.

FIGURE XXXII.

The tenſor tympani.

a The tendinous beginning.

b The belly.

c The tendon.

The ſyſtematic connection is in Fig. 29. a b c d, where the poſition is the ſame. Add Fig. 33

d e f g The malleus. d the head. e the ſlendereſt and longeſt proceſs. f the ſhorter proceſs. g the handle.

FIGURE XXXIII.

The tenſor tympani, a poſterior or inner view of it. See Fig. 32.

a the tendinous beginning.

b The belly.

c The tendon inſerted at d into the handle of the malleus below its very ſlender proceſs, where the handle lies towards the bottom of the tympanum oppoſite the membrane.

Concerning the malleus, ſee Fig. 32. d e g.

FIGURE XXXIV.

The ſtapedius.

a The belly.

b The tendon, inferted at c into the head of the ſtapes, where it inclines backward.

The ſyſtematic connection is in Fig. 28. i, and Fig. 29. e f, the poſition is the ſame in both.

d The little head of the ſtapes from whence two legs go on to the baſis e.

Muſcles of the os hyoides.

FIGURE XXXV.

The coracohyoideus.

a a The origin from the extreme edge of the upper margin of the ſcapula, near the half moon or notch that is at the root of the coracoide proceſs, from whence it bends itſelf at b.

c The firſt belly.

d The middle tendon.

e The ſecond belly.

f If its inſertion into the lower and fore part of the baſis of the os hyoides, near its horn, by a tendinous extremity.

The ſyſtematic connection is in Tab. II. *a a b* in the neck; where it is covered or concealed by the ſternocleidomaſtoideus *g h i k*, and by the ſubclavius *ſ* at its origin behind the clavicle and the ſerratus magnus *γ*. And thoſe parts of it which appear naked in Tab. II. lie under the latiſſimus colli Tab. I. *O* in the neck. It lies alſo partly under the cucullaris.

FIGURE XXXVI.

The geniohyoideus viewed from below.

a The tendinous beginning by which it ariſes from the tubercle or rough eminence b, that is fixed on the inner ſide of the lower jaw oppoſite the chin.

c The fleſhy body.

d e The end inferted into the excavation d, which is the upper and fore part of the baſis of the os hyoides, near the middle of the ſaid baſis; and is

continued to the remaining part of the baſis from the excavation to the horn and neareſt part of the horn itſelf e. Its thicker at its inſertion into the excavation, but thinner where it is inſerted into the reſt of the baſis and horn.

The ſyſtematic connection is exhibited laterally in Tab. X. Fig. 2. r s; where its extremity is ſeated behind the baſiogloſſus o. In Fig. 1. of that table it is not to be ſeen, as it lies behind the mylohyoideus d.

f f The under ſide of the lower jaw: the ſame as we have repreſented it in the tables of the bones.

g h h i i k k The lower part of the os hyoides. g h h the baſis; g its anterior part, h h the poſterior part. i i the horns. k k the ſmall grain-like bones.

FIGURE XXXVII.

The ſtylohyoideus.

a The ſlender tendon by which it begins, and which ariſes from the back part of the ſtyloide proceſs of the temporal bone, hard by the ſmall bone, which being joined to that proceſs is in many people moveable.

b The fleſhy belly.

c The tendon, inſerted at d into the anterior and lower part of the baſis of the os hyoides, where the horn is joined to it.

e The ſlit in the fleſhy part and in the tendon through which paſſes the digaſtric of the lower jaw: and above that ſlit is a ſinus impreſſed by the ſaid adjacent digaſtric muſcle.

The ſyſtematic connection is in Tab. X Fig. 1. e f; where it is in part covered by the digaſtric of the mandible g i. Then in Tab. IX. *l* in the head; where it is in part covered by the latiſſimus colli *m*, and in part by the ſternocleidomaſtoideus *r*. The fore part of it, in Tab. II. R in the neck.

g h i The os hyoides. g the baſis, h the horn, i the ſmall grain like bone.

k The maſtoide proceſs cut off near the root of the ſtyloide proceſs.

l l The ſtyloide proceſs of the temporal bone.

FIGURE XXXVIII.

The mylohyoideus viewed from below.

a a The beginning for the moſt part tendinous, ariſing from the eminence b that goes through the length of the jaw, from the innermoſt grinding tooth to the ſymphyſis of the lower jaw, being extended from behind obliquely forward towards the chin.

c The place where the right and left join together and are continued in one fleſhy part. c d the tendinous line formed by the meeting of the right and left. e the aponeuroſis.

f The inſertion of that aponeuroſis into the anterior and lower part of the baſis of the os hyoides.

g The convexity that is formed about the geniohyoideus.

The ſyſtematic connection is ſhewn laterally in Tab. X. Fig. 1. d; where it covers part of the digaſtric of the lower jaw h i. In Fig. IX. no part of it appears being covered over by the latiſſimus colli *m* in the neck. The fore part is ſeen in Tab. III. *q* in the neck, and Tab. II. Q in the neck.

Concerning the lower jaw and os hyoides, ſee Fig. 36.

FIGURE XXXIX.

The ſternohyoideus.

a b c d The tendinous beginning ariſing at a from the inner part of the breaſt bone, and particularly from that protuberant part of its margin which ſuſtains the clavicle near the cartilage of the firſt rib: it continues alſo to ariſe from the upper and poſterior part of the end of that cartilage b, and the ligament c, by which the clavicle is tied to that cartilage, likewiſe from the neareſt poſterior and lower part of the head of the clavicle d.

e The tendinous end, inſerted into the lower part of the baſis of the os hyoides near its middle.

The ſyſtematic connection is ſeen in Tab. II. *c c d* in the neck, where it is in part covered by the ſternomaſtoideus *g h*, alſo by the clavicle, ſternum, and cartilage of the firſt rib. Then in Tab. I. *i* in the neck, where the latiſſimus colli *O* is ſpread over the greateſt part of it.

f f g h The ſternum, cut off f f, g the cartilage of the firſt rib, h the clavicle; that thus the beginning of the ſternohyoideus behind it might appear to view.

Muſcles of the Tongue.

FIGURE XL.

The ſtylogloſſus, ceratogloſſus, and baſiogloſſus.

a b c d The ſtylogloſſus.

a Its origin from the anterior, inner, and almoſt extreme part of the ſtyloide proceſs which is moveable in younger ſubjects.

b The place where it firſt joins the tongue near the end of the ceratogloſſus, by which it goes along, is extended near to the end of the baſiogloſſus, and runs on farther forwards to the tip of the tongue c.

d The place where it is incurvated a little downward, and continues itſelf to the ceratogloſſus.

Add here Fig. 43. e f g.

The ſyſtematic connection is in Tab. X. Fig. 2. k l m; where at its origin, it lies concealed behind the maſtoide proceſs of the temporal bone. Then in Fig. 1. juſt above k; where the greater part is covered by the mylohyoideus d, the ſtylohyoideus e, and the digaſtric of the lower jaw g. And, laſtly, in Tab. IX. betxwit *k* and *l* in the neck; where it is covered by the ſtylohyoideus *l*.

e e f The ceratogloſſus.

e e Its origin from the outer part of the lower edge of the horn of the os hyoides, from the extremity thereof, almoſt to that part which is connected with its baſis.

f The part that belongs to the tongue.

d The place where it is continued to the ſtylogloſſus.

Add here Fig. 43. h

The ſyſtematic connection is ſeen in Tab. X. Fig. 2. n, and in Fig. 1. m, where it is in part covered by the digaſtric of the lower jaw g i, in part by the ſtylohyoideus e. In Tab. IX. it lies concealed behind the ſternomaſtoideus *r* in the neck. The anterior view of it is in Tab. III. *i* in the neck; and in Tab. II. T in the neck.

g h i The baſiogloſſus.

g h Its origin g, from the lower and fore part of the baſis of the os hyoides near its horn; and from the next adjacent and fore part of the horn itſelf h.

i The part that joins the tongue.

Add here Fig. 43. h.

The ſyſtematic connection is in Tab. X. Fig. 2. o, where part of its origin that ſprings from the os hyoides is covered by the geniohyoideus r. Then in Fig. 1. k l, where it is in part covered by the mylohyoideus d, and ſtylohyoideus e f, and digaſtric of the lower jaw i. Laſtly, in Tab. IX. juſt below the ſtylogloſſus, which lies betwixt *k* and *l* in the neck.

k Part of the lingualis. See Fig. 41. e.

l m The tongue. l the part contained in the mouth. m the part incuvated in the fauces. See Tab. X. Fig. 5. h i.

n The maſtoide proceſs here cut off, as in Fig, 37. k

o The ſtyloide proceſs of the temporal bone.

The os hyoides is the ſame here as in Fig. 37.

FIGURE XLI.

The chondrogloſſus, geniogloſſus, and lingualis.

a b The chondrogloſſus.

a The origin from the upper part of the beginning of the ſmall grain-like bone of the os hyoides.

b The place where it intermixes with the geniogloſſus, and then goes into the tongue near the beginning of the lingualis.

The ſyſtematic connection is in Tab. X Fig. 4. t, and in Fig. 3. juſt above *g*; where its greater part is covered by the fibres of the geniogloſſus, which are incurvated by the ſide of the pharynx l: and what there appears naked, is in Fig. 2. concealed behind the ceratogloſſus o.

c d The geniogloſſus.

d The tendinous beginning, by which it ariſes immediately above the geniohyoideus from the rough eminence k, that is fixed in the inner ſide of the lower jaw at its ſymphyſis. From thence it goes to the tongue.

But here we have removed thoſe fibres which inſert it into the ſmall grain-like bone of the os hyoides; as alſo we have removed thoſe thin fibres which are incurvated laterally through the membrane of the pharynx.

Add here Fig. 42. and Fig. 43. k l l l m n o p.

The ſyſtematic connection is in Tab. X. Fig. 5. o p q, and then in Fig. 4. s f, Fig 3. i k, and Fig. 2. q; where part of it is covered by the baſiogloſſus o: and what there appears naked, in Fig. 1. lies behind the mylohyoideus d

e The lingualis. See Fig. 43. a b c d.

The ſyſtematic connection is in Tab. X. Fig. 5. n, and in Fig. 4. r. Fig. 3. h. And then in Fig. 2. p; where it is partly covered by the baſiogloſſus o.

f The ſtylogloſſus. See Fig. 40. a b c.

The ceratogloſſus and baſiogloſſus are here cut off betwixt the ſtylogloſſus f, the chondrogloſſus a b, and the lingualis e. See Fig. 40. f. i.

g The epiglottis.

h The inner ſide of the lower jaw. i the part which is cut through, as in Tab. X. Fig. 2. t.

k The rough tubercle or eminence in the inner ſide of the lower jaw, at its ſymphyſis.

Concerning the tongue, ſee Fig. 40. l m. And for the os hyoides, ſee Fig. 37. g h i.

FIGURE XLII.

The geniogloſſus viewed from below.

a The tendinous beginning by which it ariſes immediately above the geniohyoideus from the rough eminence b, that is ſeated on the inner ſide of the lower jaw at its ſymphyſis.

c d d e A thin tendinous part which at d d belongs to the baſis of the os hyoides, and inſerts itſelf at e into the ſmall grain-like bone.

f Thin fibres here cut off which join the inner part of the ceratogloſſus.

g Thoſe fibres cut off which run through the ſide of the pharynx, and which are continued into the upper conſtrictor of the pharynx.

Add here Fig. 41. c d, and Fig. 43. k l l l m n o p.

The lower jaw and os hyoides may be known from Fig. 36.

FIGURE XLIII.

Repreſents the tongue ſtretched out longitudinally with its lower ſide turned up to ſhew the lingualis, geniogloſſi, and ends of the ſtylogloſſi, ceratogloſſi, and baſiogloſſi.

a b c d The lingualis.

a b Two beginnings by which it proceeds into the tongue at its root, betwixt the fibres of the geniogloſſi: the firſt of them a, betwixt that part of the the geniogloſſus which is incurvated laterally and joins the ceratogloſſus and the part that there inſerts itſelf into the tongue.

e The place where it joins with the ſtylogloſſus, and with that runs afterwards to the tip of the tongue d.

See Fig. 41. e.

e f g The ſtylogloſſus.

e The place where it is cut off.

f The place where it joins with the lingualis and with that runs to the tip of the tongue g.

See Fig. 40. e e f. g h i.

k l l l m n o p The geniogloſſus, which, becauſe it is cut off from its origin, and the tongue ſtretched out longitudinally, has here changed its figure; as will appear if you conſult Fig 41. c d.

k The origination cut from the lower jaw.

l l l Here it belongs to the tongue near the lingualis.

m Fibres which join the inner part of the ceratogloſſus and with that go to the tongue.

n Fibres which are incurvated through the ſide of the pharynx; ſome of which go to the upper conſtrictor of the pharynx.

o A thin tendinous part belonging to the baſis of the os hyoides a portion inſerted into the upper part of the beginning of the ſmall grain-like bone of the os hyoides.

See Fig. 41. c d.

q The tongue.

Concerning the os hyoides, ſee Fig. 36.

Muſcles of the Larynx.

Add here the ſtylopharyngeus Fig. 27. 28. and 30. Tab. XII.

FIGURE XLIV.

The ſternothyroideus.

a b c The broad origination from the internal amplitude of the breaſt-bone, oppoſite the lower part of the cartilage of the firſt rib, and from the edge of the ſame bone near the ſame part of the ſaid cartilage: and the portion b c from the inner part of the termination of the ſaid cartilage.

d e The other narrower origination from the upper and poſterior part d of the middle of the cartilage belonging to the firſt rib, and from the adjacent ligament e, by which the clavicle is tied to that cartilage.

f g The broad and thin part of its termination, which is tendinous at g, and inſerted into the external part of the ſide of the thyroide cartilage firſt a little above its lower edge in the fore part, and from thence obliquely upwards and backwards towards the tubercle which that cartilage has in the fore part of its upper proceſs; in which place the thyroide cartilage is protuberant in ſome people.

h The narrower and thicker part of the end, inſerted by a tendinous extremity i, into the fore-mentioned tubercle k.

The ſyſtematic connexion is in Tab. III. *q q f s r* in the neck, where its origin lies behind the clavicle, ſternum, and cartilage of the firſt rib. Then in Tab. II. *e e e* in the neck, where it is covered by the ſternohyoideus *c c*, coracohyoideus *a b*, and ſternocleidomaſtoideus *g h*: and what part of it there appears naked above and below the ſternomaſtoideus, the ſame lies behind the latiſſimus colli, Tab. I. *O* in the neck. Then in Tab. I. *n* in the neck.

l m m n The thyroide cartilage. m m the upper proceſſes. n the lower proceſs.

o The cricoide or annular cartilage.

p p p The ſternum cut off, with the cartilage of the firſt rib q r s; that thus the origin of this muſcle, which is ſeated behind it, might appear to view.

FIGURE XLV.

The hyothyroideus.

a b The origination, a from the lower and inner part of the baſis of the os hyoides near its horn; and from almoſt half of the horn itſelf that is next the baſis b.

c d e Its inſertion, c d into the lower part of the external ſide of the thyroide cartilage, juſt above the inſertion of the broader end of the ſternothyroideus, f g Fig. 44.: and before the inſertion of the part d e into the external and lower edge of the thyroide cartilage, near the middle of its fore part.

The ſyſtematic connection is in Tab. III. *s* in the neck. Then in Tab. II. Y in the neck; where the greater part is covered by the coracohyoideus *a b*, and the ſternohyoideus *c d*: and what there appears naked, lies behind the latiſſimus colli, Tab I. *O* in the neck. It is ſeen laterally in Tab. X. Fig. 1. q.

FIGURE XLVI.

The cricothyroideus, a front view.

This muſcle conſiſts of two parts, the one anterior, the other poſterior.

a b The anterior part which ariſes at a from the upper edge of the annular cartilage that belongs to its anterior and lateral part: b its inſertion into the external part of the lower margin of the thyroide cartilage, near its middle.

c d d The poſterior part, which ariſes at c from the external part of the annular cartilage, from the middle of it length-wiſe, and almoſt from its whole breadth: at its end d d, in its outer part it joins to the lower conſtrictor of the pharynx.

Add here Fig. 47. and 48.

The ſyſtematic connection is in Tab. III. o in the neck, where a large part of it is covered by the ſternothyroideus *q f*: and what there appears naked, in Tab. II. lies behind the ſternohyoideus, *c* in the neck.

FIGURE XLVII.

The cricothyroideus, a lateral view.

a b The anterior part, which here aroſe at a from the external and fore ſide of the annular cartilage even to its lower edge. b its inſertion into the outer part of the lower edge of the thyroide cartilage near the middle of its fore part.

c d d The poſterior part, which in the end of its outer part d d joins to the lower conſtrictor of the pharynx, whence it is here cut off.

Add here Fig. 48. and 46.

The ſyſtematic connection is in Tab. X. Fig. 1. v w x y.

e The thyroide cartilage.

f The cricoide cartilage.

FIGURE XLVIII.

The poſterior part of the cricothyroideus, a lateral view.

a a Its origin from the external part of the annular cartilage, for almoſt the whole breadth or height of its middle part length-wiſe.

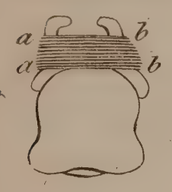
b The place from whence its outer part is cut off, which joins to the lower conſtrictor of the pharynx; under which it is inſerted into the thyroide cartilage, occupying the whole lunar edge c c c, that is formed as well by the lower proceſs of the thyroide cartilage, as by the lower margin itſelf of that cartilage, from the ſaid proceſs even to the tubercle which projects in the middle of its edge longitudinally.

The part of this muſcle that belongs to the inner margin of the thyroide cartilage could not be repreſented in this figure.

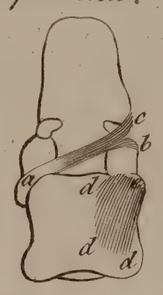
Add here Fig. 47.

TAB. XII.

I.
Arytaenoideus transversus.

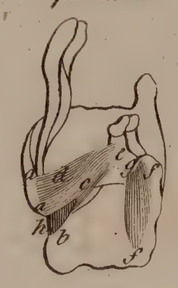


II.
Arytaenoideus obliquus.
Cricoarytaenoideus posticus.



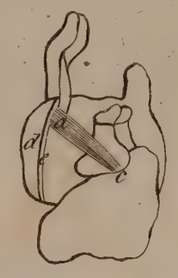
III.
Arytaenoideus obliquus.
Thyreoarytaenoideus
Thyreoepiglotticus minor, et major.

IV.
Thyreoarytaenoideus.
Cricoarytaenoideus posticus.

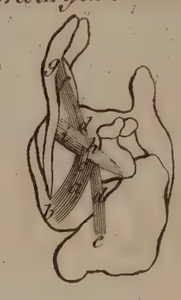


V.
Cricoarytaenoideus lateralis.

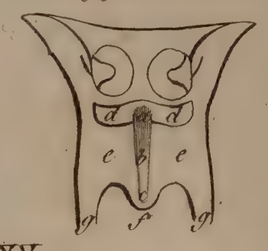
VI.
Thyreoarytaenoideus alter, minor.



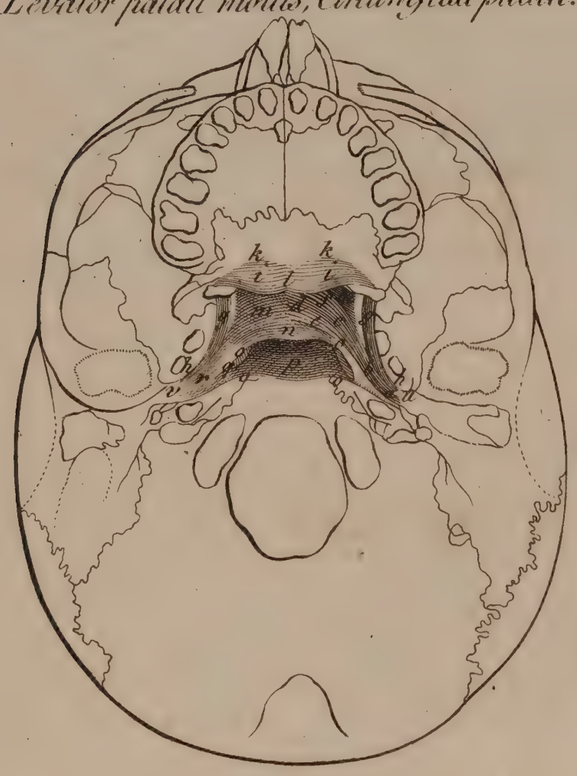
VII.
Thyreoepiglotticus major, & Thyreoarytaenoideus alter.



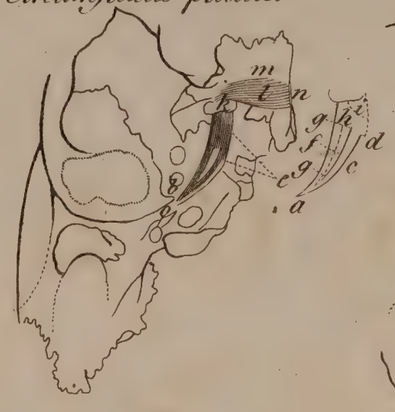
VIII.
Azygus uvulae.



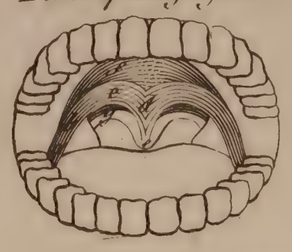
IX.
Levator palati mollis, Circumflexi palati.



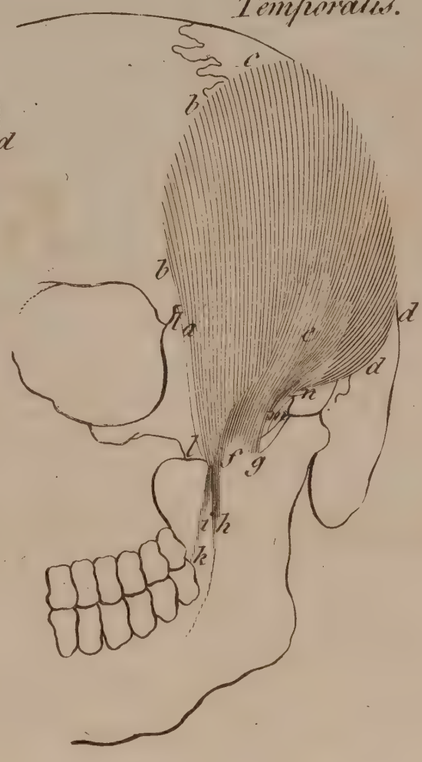
X.
Circumflexus palati.



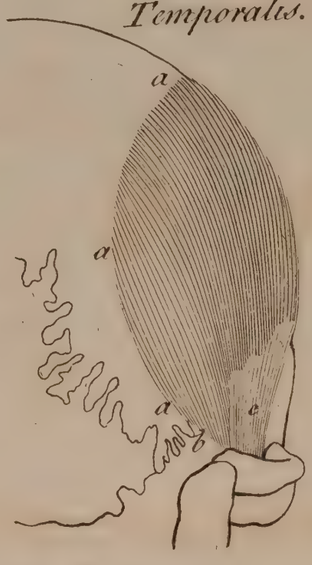
XI.
Constrictoris isthmi faucium cum Palatopharyngeis.



XII.
Temporalis.

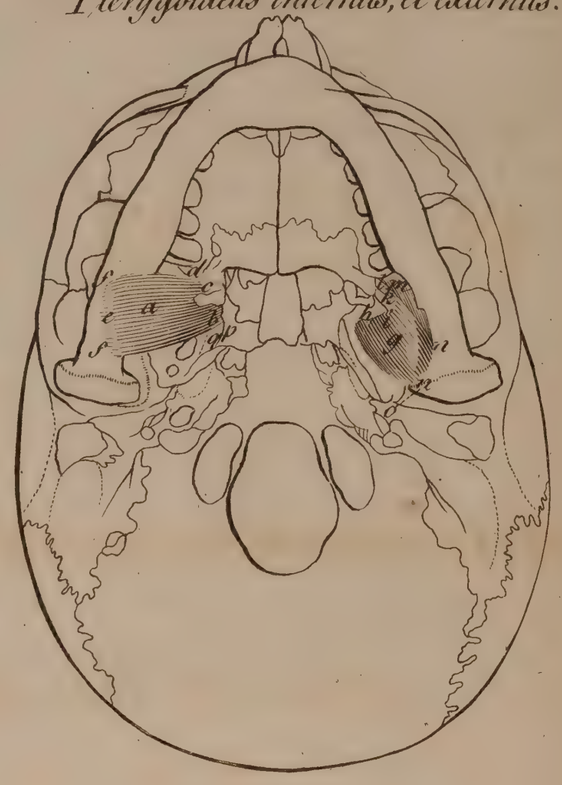


XIII.
Temporalis.

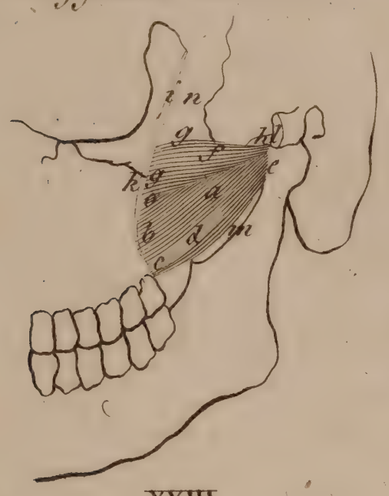


XIV.
Temporalis.

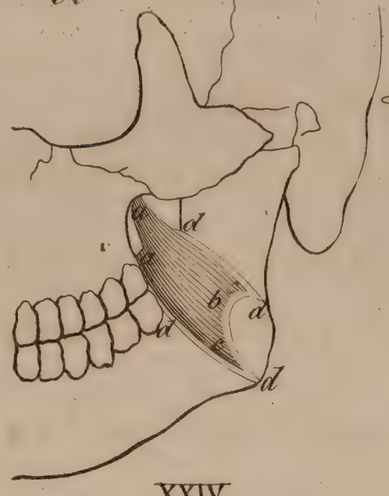
XV.
Pterygoideus internus, et externus.



XVI.
Pterygoideus externus.

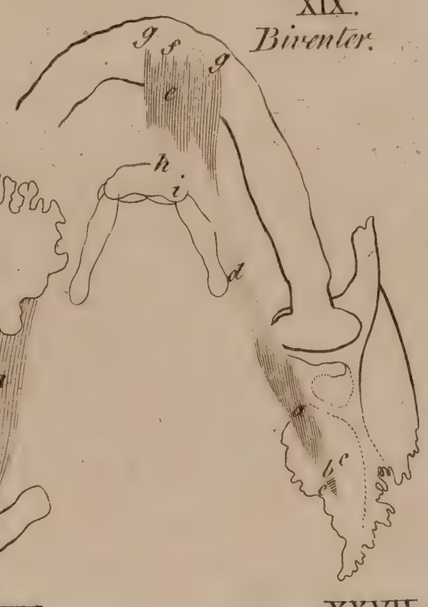


XVII.
Pterygoideus internus.



XVIII.
Biventer.

XIX.
Biventer.

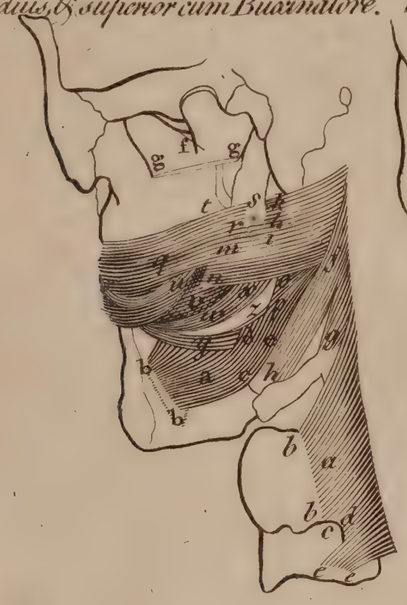


XX.
Masseter.

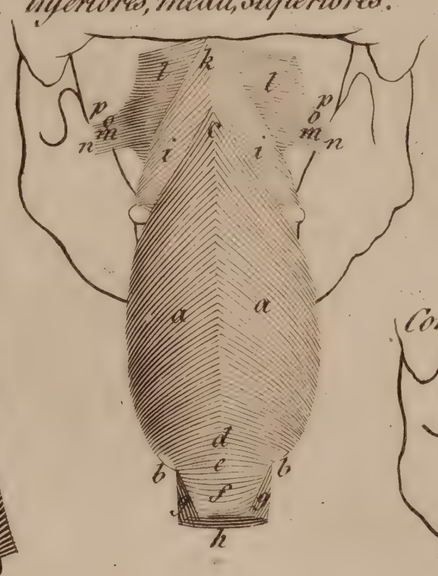
XXI.
Masseteris.

XXII.
Masseter.

XXIII.
Constrictor pharyngis inferior, medius, & superior cum Buccinatore.

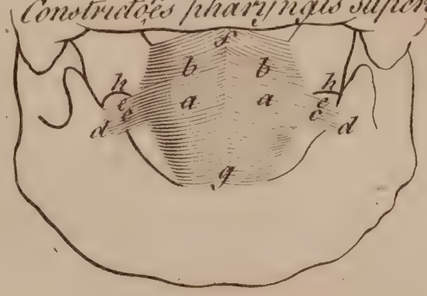


XXIV.
Constrictores pharyngis inferiores, medii, superiores.

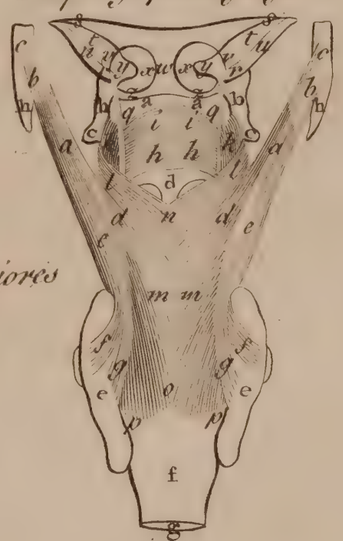


XXV.
Constrictores pharyngis medii.

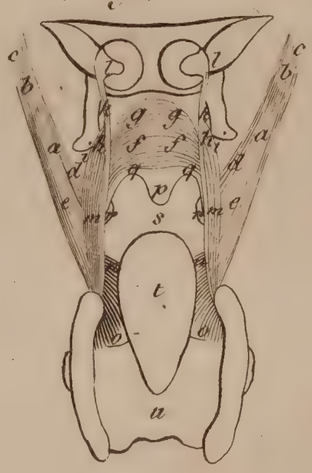
XXVI.
Constrictores pharyngis superiores



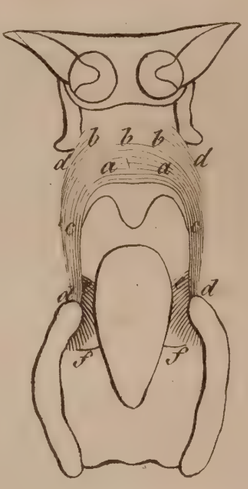
XXVII.
Stylopharyngei.
Palatopharyngei.
Salpingopharyngei.



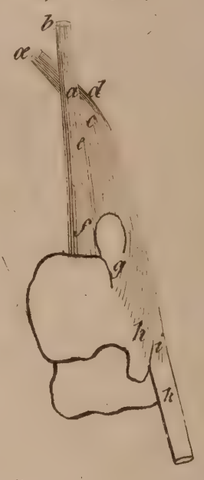
XXVIII.
Stylopharyngei.
Palatopharyngei.
Salpingopharyngei.



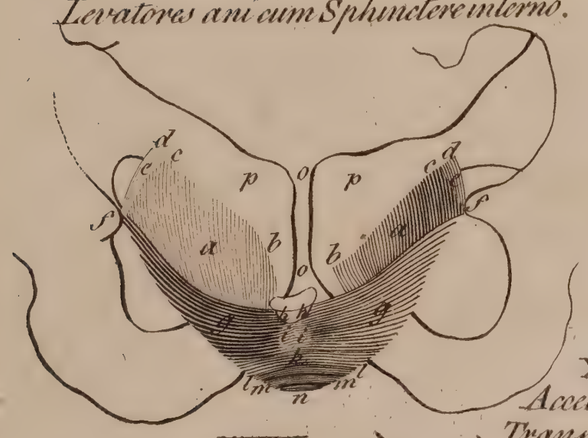
XXIX.
Palatopharingei.



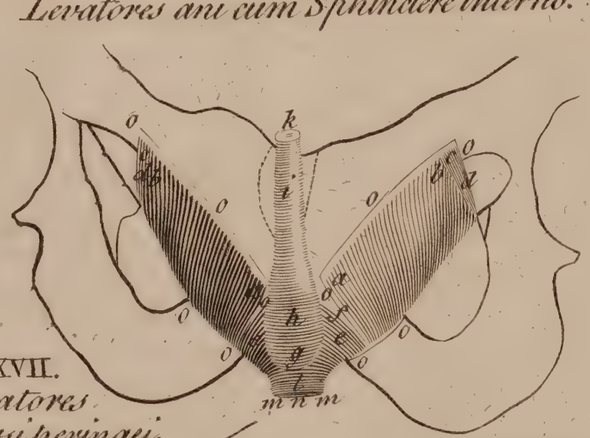
XXX.
Stylopharyngeus.
Palatopharyngeus.



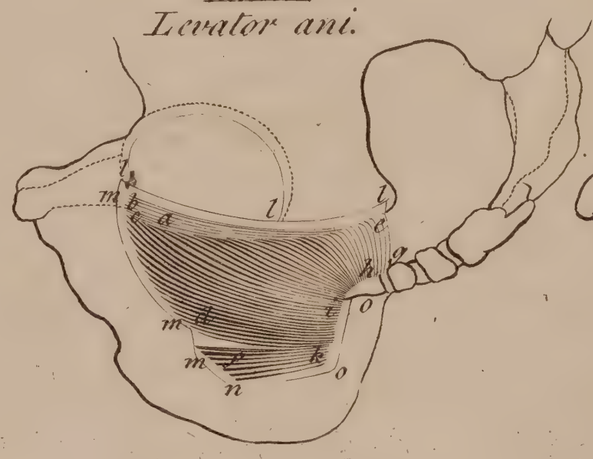
XXXI.
Levatores ani cum Sphincter interno.



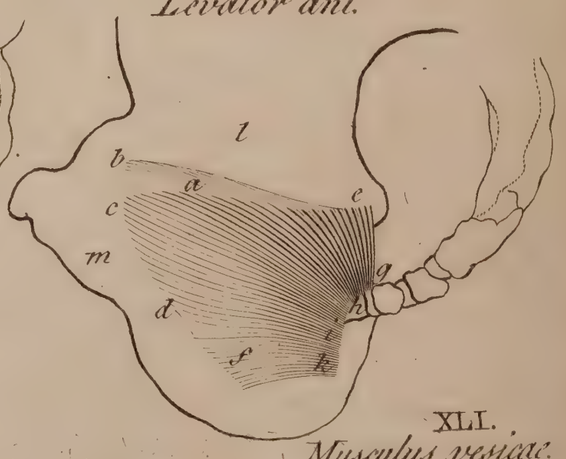
XXXII.
Levatores ani cum Sphincter interno.



XXXIII.
Levator ani.



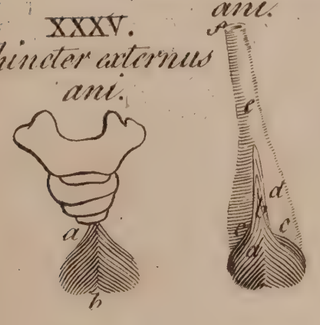
XXXIV.
Levator ani.



XXXVII.
Accelerators
Transversi perinaei.
Erectores penis.

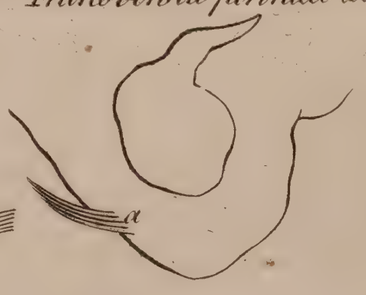
XXXVI.
Sphincter externus ani.

XXXV.
Sphincter externus ani.

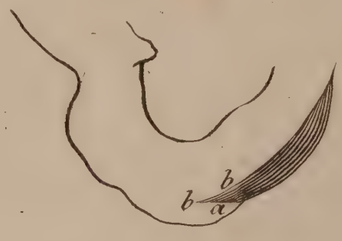


XXXVIII.
Transversus perinaei.

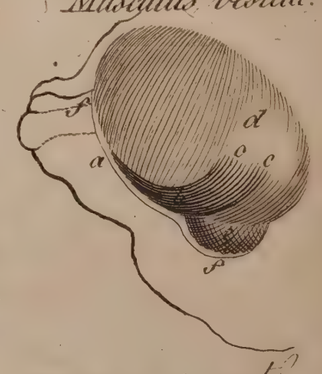
XXXIX.
Transversus perinaei alter.



XL.
Erector penis.



XLI.
Musculus vesicae.



A. Bell Sculp.

THE

Twelfth Anatomical Table

OF THE

HUMAN MUSCLES EXPLAINED.

Muſcles of the Glottis and Epiglottis.

FIGURE I.

Arytenoideus tranſverſus, its poſterior ſide.

a a Its inſertion into the inner edge of the back part of the left arytenoide cartilage, above its baſis.

b b A like inſertion of it into the right arytenoide cartilage.

The *ſyſtematic connection* is ſeen in Tab. X. Fig. 13. *h h h h*: where it is partly covered by the arytenoidei obliqui *g. g.* Alſo in Fig. 12. it is covered by the membrane of the pharynx v. Laterally in Fig. 6. o, of the ſame table, it is in part covered by the obliqui l. m m.

The cartilages of the larynx as well in this as in the next figure may be known from Fig. 14. Tab. X.

FIGURE II.

The arytenoideus obliquus, and cricoarytenoideus poſticus, the poſterior view or ſide of them.

a b c The *arytaenoideus obliquus.*

a Its origin from the upper and outer part of the poſterior ſide of the baſis of the arytenoide cartilage.

b The lower part of its extremity that is continued to the thyreoarytenoideus.

c The upper part of its extremity that goes to the epiglottis.

Before it ends in theſe extremities it bends itſelf forward and round the back part of the tip of the arytenoide cartilage, and round the additional cartilage or appendix of the ſaid tip.

Add here Fig. 3. *a b c d.*

The *ſyſtematic connection* is ſeen in Tab. X. Fig. 13. *g*; where the right obliquus croſſes the left. But in the 12th figure they are covered by the membrane of the pharynx *v.*

d d d e The *cricoarytenoideus poſticus.*

d d d Its origin from the cricoide cartilage, whoſe hollow ſurface it occupies, which it has in the back part and ſide of the middle eminence.

e The extremity inſerted into the end of the protuberance that riſes up in the back part of the outer ſide of the baſis of the arytenoide cartilage.

Add here Fig. 4. *f f g.*

The *ſyſtematic connection* is ſeen in Tab. X. Fig. 13. i; in part going under the thyroide cartilage *m.* in Fig. 12. it is covered by the membrane of the pharynx *v*, except a ſmall part below *k*; which is alſo to be ſeen in Fig. 11. A, and in Fig. 10. *g*, and in Fig. 9. I.

FIGURE III.

The arytenoideus obliquus, thyreoarytenoideus, and thyreoepiglotticus, greater and leſs viewed laterally.

a b c d Arytenoideus obliquus.

b The lower part of its end, which is continued to the thyreoarytenoideus *e.*

c d The upper part of its extremity, which is directed in courſe along by the margin of the glottis, betwixt the arytenoide cartilage and the epiglottis, and having reached the latter is inſerted into its lateral margin at *d.*

Add here Fig. 2. *a b c.*

The *ſyſtematic connection* is in Tab. X. Fig. 6. l. m m; where the left l croſſes the right m m.

e The *thyreoarytenoideus.* See Fig. 4. *a a b c d e.*

f g h Thyreoepiglotticus major.

g Its origin from the thyroide cartilage near the outer part of the upper portion of the thyreoarytenoideus; from whence it aſcends firſt over the outer part of the ſaid thyreoarytenoideus, and croſſing its upper part it then goes up by the ſide of the glottis, and is inſerted at *h* into the lateral edge of the epiglottis, adhering likewiſe to the extremity of the arytenoideus obliquus, inſerted into the ſame margin of the epiglottis.

Add here Fig. 7. *a a b c d e f g.*

The *ſyſtematic connection* is in Tab. X. Fig. 6. f g; where it is partly covered by the ſecond thyreoarytenoideus c.

i The *leſs thyreoepiglotticus*, or depreſſor of the epiglottis.

k Its origin from the inner part of the thyroide cartilage near its middle.

l Its inſertion into the lateral edge of the epiglottis, above its root.

The *ſyſtematic connection* is in Tab. X. Fig. 6. i, where its extremity lies concealed behind the ſecond thyreoarytenoideus c.

The cartilages of the larynx in this and the four following figures may be explained by the 7th figure of Tab. X.

FIGURE IV.

The thyreoarytenoideus, and cricoarytenoideus poſticus, laterally.

a a b c d e The *thyreoarytenoideus.*

a a Its origin from the lower part of the internal ſide of the thyroide cartilage near its middle.

b Its other origin from the ligament by which the cricoide and thyroide cartilages are tied together in their fore part.

c The outer part which aſcends higher.

d The part which going under the former croſſes it and lies more tranſverſely. Moſt of it lies under the ſaid outer part.

e The end inſerted into the outer part of the anterior edge of the arytenoide cartilage, above its baſis, and ſo above the end of the cricoarytenoideus lateralis, *b* Fig. 5.

Add here Fig. 3. *c.*

The *ſyſtematic connection* is in Tab. X. Fig. 6. e; where part of it is covered by the thyreoepiglotticus major f g, and the ſecond thyreoarytenoideus c.

f f g The *cricoarytenoideus poſticus.*

f f Its origin from the cricoide cartilage.

g Its extremity inſerted into the end of the tubercle that riſes up in the back part of external ſide of the baſis of the arytenoide cartilage.

Add here Fig. 2. *d d d e.*

The *ſyſtematic connection* is in Tab. X. Fig. 6. a. And in Fig. 5. *d*; where the greater part lies concealed behind the thyroide cartilage a, and behind the membrane of the pharynx. So alſo what appears naked of it in Fig. 4. d. lies concealed in Fig. 3. behind the lower conſtrictor of the pharynx z d.

FIGURE V.

The cricoarytenoideus lateralis.

a a Its origin from the upper edge of the outer ſide of the cricoide cartilage, on one ſide, juſt beneath the arytenoide cartilage.

b Its end inſerted into the baſis of the arytenoide cartilage, on one ſide juſt before the end of the cricoarytenoideus poſticus, *g* Fig. 4.

The *ſyſtematic connection* is in Tab. X. Fig. 6. b;

FIGURE VI.

The ſecond or leſs thyreoarytenoideus.

a Its origin from the inner and upper part of the thyroide cartilage, not far from its hart-like fiſſure.

c Its extremity inſerted into the arytenoide cartilage juſt above the cricoarytenoideus lateralis, *b* Fig. 5.

Add here Fig. 7. *h i.*

The *ſyſtematic connection* is in Tab. X. Fig. 6. c d.

d The left wing of the thyroide cartilage, cut off at *e.*

FIGURE VII.

The greater thyreoepiglotticus, and ſecond thyreoarytenoideus.

a a b c The *thyreoepiglotticus major* as we ſometimes find it.

b Its origin from the thyroide cartilage, near the upper and outer part of the upper origin of the thyreoarytenoideus; from whence it aſcends firſt along

The outer ſide of the ſaid thyreoarytenoideus, by the ſide of the glottis to the epiglottis,

c The faſciculus or portion that paſſes through the ſecond thyreoarytenoideus *b*, while the reſt goes behind it.

d d e The acceſſory portion, ariſing at *d* from the outer part of the upper edge of the cricoide cartilage, on one ſide.

f The common end inſerted at *g* into the edge of the epiglottis.

Add here Fig. 3. *f g h*.

h The *ſecond thyreoarytenoideus*, cut from its origin at *i*. See Fig. 6. *a c*.

Of the uvula.

FIGURE VIII.

The azygus or ſingle muſcle of the uvula, viewed in its upper and poſterior part.

a The origin which is firſt thin, tendinous, and interwove with the tendinous membrane *d d*, and with the tendinous ends of the elevators of the palate, cloſe by the future or meeting of the palate bones, ſo as ſeemingly to ariſe from thence.

b From thence it runs through the middle of the ſoft palate *e e*, and through the length of the uvula *c*.

The *ſyſtematic connection* is in Tab. X. Fig. 13. m.

d d The tendinous membrane which coming out of the noſtrils runs through the upper part of the ſoft palate under its ſkin or covering, which is here in a manner repreſented as cut off by the circumference of this membrane. See Tab. X. Fig. 14. m.

e e The ſoft or moveable palate.

f The uvula.

g g The poſterior arches which deſcend from the ſoft palate through the ſides of the fauces.

The reſt may be known from Fig. 27.

Muſcles of the ſoft Palate.

Add here the *palatopharyngeus*, Fig. 27. *b*, &c. Fig. 28. *f*, &c. Fig. 29. *a*, &c. and Fig. 11. *f g*.

FIGURE IX.

The elevator and circumflex muſcles of the ſoft palate viewed on the lower ſide with the ſoft palate, uvula, entrance into the noſtrils, and the Euſtachian tubes.

a b c d e f The *elevator of the ſoft palate.*

a The tendinous beginning by which it ariſes from the end of the os petroſum, where it is perforated by the Euſtachian tube; and from the lower ſide of the end of the tube, immediately under that part of it which is all the way ſoft or cartilaginous.

b Its courſe to the palate, into which at *c* it ſpreads more and more, to

d Its inſertion along the middle of the palate, almoſt from the poſterior edge of the palate bones to the root of the uvula, where the right and left are continued one to the other. See Tab. X. Fig. 14. k.

e The lower part, forming a ſeparate portion.

f The part which is connected by a thin tendinous end to the tendinous membrane, that is extended above upon the ſoft palate, coming from the noſtrils; and with that membrane ſeems to be inſerted into the middle and poſterior edge of the palate bones. See Tab. X. Fig. 14. i.

The *ſyſtematic connection* of its poſterior ſide is ſeen in Tab. X. Fig. 14. g h i k l. Then in Fig. 13. g h i; where part lies behind the ſalpingopharyngeus q, and the reſt under the palatopharyngeus n. Then in Fig. 12. where a ſmall part w appears at the ſide of the membrane of the pharynx. See alſo Fig 11. b; and Fig. 10. i; and Fig. 9. k. Laterally, Tab. X. Fig. 5, and Fig. 4. b, and Fig. 3. b; where part lies concealed behind the upper conſtrictor of the pharynx q: and Fig. 2. g.

g h i k. g h i k l The *circumflex muſcles of the palate.*

h The origin from the end of the os petroſum, near the outer ſide of the elevator of the ſoft palate.

i Its broad tendon ſpread through the beginning of the ſoft palate, and inſerted at *k* into the poſterior lunar edge of the palate bones.

l The place where the broad tendons, right and left, meet and conjoin together.

Add here Fig. 10.

The *ſyſtematic connection* of this circumflex muſcle appears in its poſterir part in Tab. X. Fig. 16. i—n. Then in Fig. 15. h i k; where the part in the palate is covered by the tendinous membrane n, which coming out of the noſtrils goes through the upper part of the ſoft palate: covered alſo by the beginning of the palatopharyngeus q, and upper conſtrictor of the pharynx o. Then in Fig. 14. n; where again the greater part is covered by the elevator of the ſoft palate g. See it alſo in Fig. 13. k; and in Fig. 12. x, at the ſide of the membrane of the pharnyx: in Fig. 11. c: and in Fig. 10. k; where it lies hid alſo behind the upper conſtrictor of the pharynx b: and in the ſame manner it appears in Fig. 9. l, and Fig. 8, t.

Laterally it is ſeen in Tab. X. Fig. 5. a, and Fig. 4. a, Fig. 3. a, and Fig. 2. f.

m m The upper membrane of the ſoft palate.

n The uvula.

o o o o The circumference round which the membrane of the fauces is cut off.

p The opening of the fauces into the noſtrils.

q The Euſtachian tube: which appears alſo in the other ſide.

r The membranous part of the Euſtachian tube.

u The end of os petroſum, where it is perforated by the ſaid Euſtachian tube; from whence at *v* in the right ſide, the tube *r* is continued. It is marked *o* in Fig. 10.

The other bones of the head are the ſame as explained in the tables of the bones.

FIGURE X.

The circumflexus of the palate viewed in its lower part.

a The tendinous beginning ariſing from the end of the os petroſum *b*, where the ſame is perforated by the Euſtachian tube; and from the lower part of the end of the ſaid tube, juſt on the outer ſide of that part of it which is wholly ſoft or membranous; and ariſing in the ſame manner with reſpect to the beginning of the elevator of the ſoft palate. See Fig. 9. *b*.

a c From thence in its upper part the ſaid tendinous beginning runs along the edge of the muſcles to *c*. This tendinous excurſion of its origin was obſerved broader along the outer ſide of the muſcle, and adhered to a certain thin narrow and tendinous ligament, that was extended from the firſt riſe of the muſcle along the internal root of the acute eminence in the multiform bone, which is behind the hole for the exit of the third branch of the fifth pair of nerves; and ſo was continued along the inner ſide of the ſaid oblong eminence that ſtands out from the multiform bone betwixt the ſaid hole and the os petroſum.

d its anterior beginning ariſing at *e* from the inner protuberant ſide of the oblong ſinus (*p* Fig. 15.) which is impreſſed in the root of the internal pterygoide proceſs of the multiform bone, in its outer ſide, *q* Fig. 15.

f The tendinous beginning of the other portion or lamella, adhering to the upper part of the outer ſide of the Euſtachian tube, where that is of a cartilaginous nature; from whence the part *g g* is cut off.

b The common fleſhy belly.

i The beginning of the tendon which it forms, and which being broad at *i*, afterwards is drawn up in a narrow compaſs, when it bends itſelf round and behind the hook *k*, of the pterygoide proceſs of the multiform bone.

l After this inflexion it expands at *l* through the beginning of the ſoft palate in form of an aponeuroſis, and is inſerted at *m*, into the poſterior ſemilunar edge of the palate bone, as far as the palatine future; and there at laſt it joins with its fellow, *l* Fig. 9, from whence it is cut off at *n*.

Part of this muſcle which is ſeen inſerted by a tendinous end into the lower part of the pterygoide proceſs, at the outer ſide of the root of its little hook, is not here expreſſed; as it may poſſibly be an exception from the general deſign of nature.

Add here Fig. 9. *g—l*.

o The end of the os petroſum, where it is perforated by the Euſtachian tube. See Fig. 9. *v*.

FIGURE XI.

The conſtrictors of the iſthmus of the fauces, with the palatopharyngei, a fore view.

a b c d e The conſtrictor of the iſthmus of the fauces.

a The place where it aſcends, from the upper part of the edge of the tongue, round its root.

b Its courſe from the tongue to the palate, before the tonſil, and through the arch which is ſeated in the fauces by the ſide of the tongue, and belongs to the ſoft palate.

c Its courſe through the ſoft palate.

d The meeting of the right and left, from whence ſmall portions run out into the uvula *e*.

The *ſyſtematic connection* is in Tab. X. Fig. 17. f g. Laterally in Tab. X. Fig. 5. g: Fig. 4. l: and Fig. 3. c; where the greater part lies hid behind the upper conſtrictor of the pharynx s: and the ſame in Fig 2. i.

f g The *palatopharyngeus*, that part of it which runs through the ſoft palate above the conſtrictor of the iſthmus, under part of the elevator of the ſoft palate. *f* the part which is laid bare before the ſaid conſtrictor. *g* the part that is naked behind it.

Add here Fig. 27. *b*, &c. Fig. 28. *f*, &c. Fig. 29. and Fig. 30. *d*, &c.

The *ſyſtematic connection* is in Tab. X. Fig. 17. k l; where (as here) a great part is covered by the conſtrictor of the iſthmus of the fauces g.

From which laſt cited figure the reſt of this may be underſtood.

Muſcles of the lower Jaw.

FIGURE XII.

The temporalis in its fore part.

a b b c d d The firſt beginning of its origination, coming at *a* from the upper poceſs of the os jugale; at *b b c* from the eminence that is in the ſide of the os frontis, and in the parietal bone *c*; at *d d* from the temporal bone.

e The tendon.

f g h Its inſertion, at *f*, into the top of the coronoide proceſs of the lower jaw, its poſterior edge *g*, and its anterior edge *h* going from thence into the point: and the other tip of the tendon which is longer and thicker, is fixed into the eminence *k*, which the coronoide proceſs forms at the inner and fore ſide of its root. Near

m n The poſterior and lower part of the tendon, bends itſelf round the hollow root of the zygomatic proceſs in its deſcent under the os jugale to the lower jaw.

Add here Fig. 13. and 14.

The *ſyſtematic connection* is in Tab. II. i, &c. in the head; where it paſſes under the os jugale, lying under and behind the maſſeter o r. In Tab I. it alſo lies under the aponeuroſis epicranii a in the head; and with that under the attollens auriculae *G D*, the anterior of ditto Z, the frontalis b d, and the orbicularis of the eye-lids m n.

l l Part of the os jugale cut off. *m* its proceſs cut off which meets with the zygomatic proceſs of the temporal bone, which is alſo cut off at *n*.

FIGURE XIII.

The temporalis in its back part.

a a a b The firſt beginning of its origination from the eminence of the parietal bone *a a a*, and mamillary eminence *b*.

The reſt of its origination from the breadth of the ſide of the ſkull, which is made up by the ſuperior proceſs of the os jugale, of the lower ſide of the os frontis, by the parietal bone and os ſquamoſum, by the largeſt proceſs of the multifom bone, and the eminences which are in the lower part of its ſide, could not be repreſented in theſe figures, as thoſe parts from whence it ariſes lie underneath the muſcle.

Outwardly part of it ariſes or deſcends from the tendinous membrane which covers it, and which is here removed.

c The tendon.

Add here Fig. 12. and 14.

The *ſyſtematic connection* of this part is in Tab. IV A, &c. in the head; where it paſſes under the os jugale, and then goes behind the maſſeter E G. In Tab. V. it alſo lies under the aponeuroſis of the epicranius d d, and with that under the attollens f g, and the anterior muſcle k, of the external ear.

FIGURE XIV.

The inſertion of the temporalis in the inner ſide of the jaw.

a Denotes a thin tendinous part of its end, inſerted into the poſterior edge of the root of the coronoide proceſs of the lower jaw.

b b The inſertion of a fleſhy part into the whole inner ſide of the root of the coronoide proceſs.

c The thicker point of the tendon, inſerted at *d* into the eminence which is in the fore part of the root of the coronoide proceſs.

e The the thinner point of the tendon.

Add here Fig. 12 and 13.

f The inner ſide of the left half of the lower jaw.

FIGURE XV.

The pterygoideus internus and externus viewed from below.

a The *pterygoideus internus*.

b Its origination by a tendinous beginning from the bottom of the cavity in the ptergoide proceſs of the multiform bone; alſo ariſing from little leſs than the whole ſurface of the inner ſide of the outer plate or wing of the ſaid proceſs.

c Part of the origination from the lower ſide of the palate bone, where that is inſerted betwixt the opening of the pterygoide proceſs. From thence it has a tendinous beginning: and near the ſame place it alſo ariſes at *d* from the upper jaw bone.

e The tendinous end which is inſerted into the lower and inner ſide of that part of the mandible which aſcends to the head, even as far as its lower angle *ff*.

Add here Fig. 17.

g The *pterygoideus externus*.

h Its origination from almoſt the whole outer ſide of this outer plate of the pterygoide proceſs.

i Its origin from the lower part of the edge of the ſaid plate, that looks towards the pterygoide excavation.

k Its origination from the lower margin of the ſaid plate.

l The place where it ariſes from the outer part of the pterygoide portion of the palate bone, and from the fartheſt part of the upper jaw.

k l The tendinous part of its beginning.

m A part which comes from the lower part of the multiform bone, and from the outer ſide of the root of the pterygoide proceſs.

n n o The tendinous end inſerted at *n n* into the neck of the lower jaw, where the ſame becomes hollow on the inner ſide of its fore part, immediately after its round head: Alſo to the anterior and inner edge of the cartilaginous plate *o*, that is interpoſed betwixt the articulation of the lower jaw.

Add here Fig. 16.

p The protuberance of the inner plate of the oblong ſinus, that is impreſſed at *q* in the root of the inner ſide of the pterygoide proceſs of the multiform bone, in its outer part. From which protuberant plate ariſes the circumflexus of the palate, *e* Fig. 10.

The remaining bones of the head here are the ſame, as explained in our tables of the bones.

FIGURE XVI.

The pterygoideus externus, in its outer, or fore part.

a Its lower part.

b c Its origin behind the jaw from almoſt the whole external ſurface of the outer plate of the pterygoide proceſs; and below, near *c*, from the outer part of the pterygoide portion of the palate bone, and extremity of the upper jaw.

d The tendinous part.

e The extremity inſerted into the neck of the lower jaw, where it has an excavation in the inner part of its anterior edge, juſt below its head.

f The upper part, whoſe fibres meet in an acute angle with thoſe of the lower part.

g g Its origin from the lower part of the multiform bone, near the outer ſide of the root of the pterygoide proceſs.

h The extremity that is inſerted above the lower part of the mandible.

Add here Fig. 15 *g—o*.

The *ſyſtematic connection* is in Tab. III. *e e* in the head, where it in part lies hid behind the buccinator v, the upper jaw and os jugale, alſo behind the zygomatic proceſs, and the coronoid proceſs of the lower jaw, about which it paſſes behind the inſertion of the temporalis. Then, in Tab. II. A in the head; where alſo it lies hid behind the upper jaw, the os jugale, and the buccinator z: alſo behind the maſſeter r.

Laterally in Tab. X. Fig. 1. a, where it is partly covered by the pterygoideus internus b, and in part lies behind the lower jaw.

i The os jugale here cut off, *k* the upper jaw cut off, *l* the zygomatic proceſs of the temporal bone here cut off, *m* the coronoide proceſs of the lower jaw-bone here cut off, which intermediate bones are cut out, that the muſcle may come into view.

n The largeſt lateral proceſs of the multiform bone.

o The upper jaw-bone.

FIGURE XVII.

The pterygoideus internus in its fore part.

a a Here its origination lies behind, in a cavity of the pterygoide proceſs of the multiform bone.

b The tendinous end which at *c c* begins to inſert itſelf into the lower portion of the inner ſide of that part of the lower jaw, which riſes up to the head; where its inſertion is extended as far as the lower angle. See *f f* Fig. 15.

Add here Fig. 15. *a—f*.

The *ſyſtematic connection* is in Tab. IV. r in the head; where (as here) at its origination it lies behind the pterygoide proceſs, and alſo behind the lower jaw, upon which it deſcends behind the extremity of the temporalis. Then, in Tab. III. *f* in the head; where it alſo lies behind the buccinator v, and is covered by the external pterygoideus *e*. And what part appears naked in Tab. III. in Tab. II. lies behind the maſſeter *r* in the head.

Poſteriorly it is ſeen in Tab. VII. c in the head; where it likewiſe is hid behind the mamillary proceſs, and the trachelomaſtoideus z B in the neck. Then, in Tab. VI. I in the head, where it lies hid behind the ſplenius capitis P in the neck. Next, in Tab. V. *r* in the head, where it is in part covered by the latiſſimus colli t, behind the ſternomaſtoideus u in the neck, and behind the outer ear.

Laterally Tab. X. Fig. 1. b c, it lies hid at its origin behind the maſtoide proceſs. In Tab. IX. *i k* in the head, it is partly covered by the latiſſimus colli *q o*; and, in part, it lies hid behind the ſternomaſtoideus *r* in the neck, and, in part, behind the outer ear.

d d d d A portion of the lower jaw cut off, to ſhew the muſcle that is ſeated behind it.

FIGURE XVIII.

The biventer of the lower jaw viewed laterally.

d The firſt belly.

b The middle tendon.

e The ſecond belly, inſerted at *d* into the back part of the lower edge of the mandible, near the middle of the chin.

Add here Fig. 19.

The *ſyſtemaeic connection* appears in Tab. X. Fig. 1. g h i i; where its origination (as here) is hid behind the mamillary proceſs, and is partly covered by the ſtylohyoideus e f. In Tab. IX. it is wholly covered by the latiſſimus colli *m* in the neck, by the ſternocleidomaſtoideus *r* in the neck, by the ſplenius capitis *u*, the ſtylohyoideus *l*, &c.

Anteriorly it appears in Tab II. y P in the head; where, in part, it lies hid behind the lower jaw, and in part is covered by the ſternocleidomaſtoideus *l* in the neck, and partly by the ſtylohyoideus R. Then, in Tab I. *S* in the head, where it is likewiſe hid behind the lower jaw, covered by the ſternocleidomaſtoideus *W* in the neck, and goes behind the outer ear: And below (where it is naked in Tab. II.) it is covered by the latiſſimus colli *O*.

Poſteriorly it is ſeen in Tab. VI. L in the head, where it is concealed behind the ſplenius capitis P in the neck, and elevator of the ſcapula *Z*. And what here naked, in Tab. V. lies behind the ſternocleidomaſtoideus u in the ne is

ck.

FIGURE XIX.

The Biventer of the mandible viewed from below.

a Its firſt belly, *b* the tendinous origin of it from an inciſure *c c*, that divides the root of the maſtoide proceſs of the temporal bone on its inner ſide; and principally from the inner and lower edge of it.

d The middle tendon.

e The ſecond belly inſerted by a tendinous end *f* into the back part of the lower edge of the mandible *g g*, near the middle of the chin.

h The aponeuroſis that comes out from the lower ſide of the tendinous inſertion *f*, and from the tendinous beginning of the ſecond belly, and afterwards fixes itſelf at *i* into the fore part of the baſis of the os hyoides, near the lateral part of its lower edge, betwixt the ends of the mylohyoideus, ſternohyoideus, and coracohyoideus.

Add here Fig. 18.

The bones here may be underſtood from the tables of the bones.

FIGURE XX.

The maſſeter, in its fore part.

a The outer and larger part.

b The tendinous part of its origin externally.

c Its origin from the anterior and lower part of the external proceſs of the upper jaw that joins the os jugale; from whence it is continued all along externally from the lower edge of the os jugale, where it forms part of the zygomatic proceſs, ceaſing its origination a little before the lower part of the zygomatic future.

e f The tendinous end inſerted into the ſurface of the outer part of the ſide of the lower jaw, even as far as the extreme angle *g*.

h The inner and leſs portion of this muſcle, where it lies uncovered.

i The origin of this portion from the lower edge of the os jugale, near the zygomatic proceſs of the temporal bone: and at *k* it ariſes from the lower margin of the zygomatic proceſs, as far as the tubercle that ſtands out for the articulation of the lower jaw.

l A portion that goes off above the os jugale from the inner part of the tendinous membrane, that covers the temporalis externally, and is fixed to the os jugale; from which membrane this portion is cut off.

Add here Fig. 21. and 22.

The *ſyſtematic connection* appears in Tab. II. o—x in the head. Then in Tab. I. V W X Y in the head; where it is in part covered by the zygomaticus major E, and the latiſſimus colli *c c*.

FIGURE XXI.

The interior and leſs portion of the maſſeter, in its fore part.

a a b Its origin from the whole length of the os jugale: *a a* from the bottom part of the lower margin of the os jugale, all the way as it extends to the zygomatic proceſs of the temporal bone; and from that proceſs itſelf of the temporal bone at *b*, as far as the tubercle that ſtands out for the articulation of the lower jaw.

c A tendinous part of its origin.

d The tendinous end inſerted into the external ſide of the coronoide proceſs, from the top to the bottom of it: and alſo into the next adjacent part of the lower jaw, below the root of the ſaid proceſs *e e e*.

f The portion that goes off above the os jugale from the inner part of the tendinous membrane, that covers the temporalis externally, and is fixed to the os jugale: from which membrane, here removed, this portion of the maſſeter is cut off.

Its origin from the inner ſide of the os jugale cannot be perceived in the figure.

Add here Fig. 20. and 22.

FIGURE XXII.

The maſſeter viewed in its back part.

a The outer and larger part, inſerted at the inferior angle of the lower jaw *b b*.

c d The inner and leſs portion. *c* the outer part that lis uncovered. *d* the inner part.

e Its origin from the zygomatic proceſs of the temporal bone.

Add here Fig. 20. and 21.

The *ſyſtematic connection* appears in Tab VI. E F G H in the head. Then in Tab V. p q in the head; where part of it is covered by the latiſſimus colli t, part by the greater zygomaticus r, and part lies hid behind the external ear.

Laterally it appears in Tab. IX. *d—h* in the head; where it is partly covered by the latiſſimus colli *o p*, and in part by the greater zygomaticus y z.

Muſcles of the Pharynx.

Add here the *Palatopharyngeus*, Fig. 11. f g.

FIGURE XXIII.

The lower, middle, and upper conſtrictors of the pharynx with the buccinator viewed laterally.

a The *lower conſtrictor of the pharynx.*

b b c d The head which ariſes from thyroide cartilage; and particularly *b b* from the outer part of the upper margin before the ſuperior proceſs; and from the adjacent tubercle that is at the root of the ſaid proceſs; alſo from the oblong eminence that is in the ſide of the thyroide cartilage. *c* from the lower margin of the cartilage that is before its lower proceſs. *d* from the outer part of its lower proceſs.

e e The head ariſing from the lower part of the external ſide of the cricoide cartilage near its back part, immediately below the thyroide proceſs, which receives that of the cricoide cartilage.

Betwixt theſe two heads, near *d*, it receives a portion from the cricothyroideus, d d Fig. 47. Tab. XI.

Add here Fig. 24. *a*.

The *ſyſtematic connection* is ſeen in Tab. X. Fig. 3. z. and Fig. 2, *d*. Then in Fig. 1. *b*; where part of its origin lies under the hyothyreoideus q.

Anteriorly it is ſeen in Tab. III. *o* in the neck; where it is partly covered by the hyothyreoideus *t*, and part of it lies hid behind the ſternohyoideus *q*. Then in Tab II. X. in the neck; where it is partly likewiſe covered by the hyothyreoideus Y, and alſo lies hid behind the ſternocleidomaſtoideus *l*. But what appears naked in Tab. II. lies hid in Tab. I. behind the latiſſimus colli O in the neck.

f The middle conſtrictor of the pharynx.

g One of the heads which is the broadeſt, ariſing from the upper and outer part of the end of the horn of the os hyoides.

h The other head ariſing from the ſmall grain-like bone of the os hyoides.

Add here Fig. 24. *i*. and Fig. 25.

The *ſyſtematic connection* is in Tab. X. Fig. 3. w x y; where (as here) its lower part is covered by the lower conſtrictor z. Then in Fig. 2. *a b e*; where alſo its lower part is covered by the lower conſtrictor *d*, and alſo by the origin of the ceratogloſſus n, and baſiogloſſus o. Then in Fig. I. *d e f*; where alſo its lower part is covered by the lower conſtrictor *b*, and by the origin of the ceratogloſſus m, the baſiogloſſus l, and the biventer g of the lower jaw.

i The *upper conſtrictor of the pharynx.*

k The uppermoſt part, which comes out from the ſuperior part of the poſterior edge of the tendon of the circumflexus of the palate, where that paſſes from behind the hook into the palate. See its origin Tab. X. Fig. 15. o.

l The part that ariſes from the inner ſide of the whole length of the hook of the pterygoide proceſs of the multiform bone, and from the inner plate of the ſaid proceſs, at the root of the little hook.

m That part that is joined to the middle origin of the buccinator.

n The part that ariſes from the inner ſide of the lower jaw, near the upper edge of the ſocket of the laſt grinding tooth: from whence it is cut off.

o The very thin part that ariſes from the ſide of the root of the tongue, where the ſtyloglosſus firſt meets the ceratogloſſus.

p That part that comes from the fibres of the geniogloſſus, which are incurvated round the ſide of the pharynx.

Add here Fig. 24. *l*. and Fig. 26.

The *ſyſtematic connection* is in Tab. X. Fig. 3. p q r s t u n; where (as here it is in part covered by the middle conſtrictor w. Then in Fig. 2. y y z, where in like manner it is partly covered by the middle conſtrictor *a*; and it alſo lies hid behind the ſtylopharyngeus w, aud the ſtyloglosſus k. Then in Fig. 1. e; where alſo it is in part covered by the middle conſtrictor *d*, and lies hid behind the biventer of the lower jaw g.

q The *buccinator.*

r Its origination from the outer part of the end of the hook of the pterygoide proceſs of the multiform bone.

s The origin from the bottom of the ſpace, that is betwixt the hook and outer plate of the ſaid proceſs.

t The part where it ariſes from the outer ſide of the upper jaw, immediately above the gums, behind the innermoſt grinding tooth.

u The part which ariſes from the outer ſide of the lower jaw, from an oblong ridge ſent out for that purpoſe, betwixt the innermoſt grinder and the root of the coronoide proceſs, from whence it is here cut off.

m The intermediate part of this muſcle, that is continued to the upper conſtrictor of the pharynx.

Add here Tab. XI. Fig. 14. a—e and Fig. 13. k k.

The *ſyſtematic connection* is ſeen in Tab. IX. *c* in the head; where it is covered by the zygomaticus major y, the maſſeter *d*, and the latiſſimus colli *o p*.

v The tongue. See Tab. XI. Fig. 41.

w The ſtyloglosſus, here cut off at *x*. See Tab. XI. Fig. 41. f.

y The lingualis. See Tab XI. Fig. 41. e.

z The ceratogloſſus and baſiogloſſus cut off. See Tab. XI. Fig. 41. betwixt f b e.

a The geniogloſſus, ariſing at b b from the rough eminence that is in the inner ſide of the lower jaw near its ſymphyſis. c thin fibres incurvated round the ſide of the pharynx, ſome of which aſcend at d to the ceratogloſſus and ſtyloglosſus, others vaniſh at e in the membrane of the pharynx, and others march at *p* to the upper conſtrictor of the pharynx. See Tab. XI. Fig. 41. c d, and Fig. 42.

f The lower jaw, cut off at g g.

The reſt may be known from Fig. 2. Tab. X.

FIGURE XXIV.

The upper, middle, and lower conſtrictors of the pharynx, in their back part.

a a The *lower conſtrictor of the pharynx.*

b b The origination from the cricoide cartilage.

c The point in which they terminate above.

c—d The courſe in which the fibres meet in angles, more acute as they aſcend higher.

e The part where the right and left fibres are continued one into the other in curves.

Add here Fig. 23 *a*.

The *ſyſtematic connection* is in Tab. X. Fig. 8. a b. a b c d e.

f The inner fibres of the gula, which are tranſverſe, laid bare in this place. *g g* the outer fibres which deſcend obliquely backward on each ſide.

h The gula or oeſophagus cut off.

The *ſyſtematic connection* of this part is in Tab. X. Fig. 8. f. g g

i i The *middle conſtrictors of the pharynx*, a great part of which lies under the lower *a a c*.

k The point in which they terminate above; and which in many bodies is found thin, tendinous, and inſerted into the lower part of the occipital bone, before its great foramen.

Add here Fig. 25. and Fig. 23. *f g h*.

The *ſyſtematic connection* appears in Tab. X. Fig. 9. a. a b c. Then in Fig. 8. n. n o; where (as here) a great part lies under the lower conſtrictors a a e.

l l The *upper conſtrictors of the pharynx*, of which a great part lies under the middle conſtrictors *i. i k*.

m m Parts which ariſe from the lower jaw at *n n*, near the innermoſt of the grinding teeth.

o o The parts cut off from the buccinators.

See Fig. 26. and add Fig. 23. *i—p*.

The *ſyſtematic connection* appears in Tab. X. Fig. 10. a—g. a—g; where they in part lie behind the ſtylopharyngei o p. o p. Then in Fig. 9. d e f. d e f; where they are alſo behind the ſtylopharyngei r q. r q; and a great part of them (as here) lies behind the middle conſtrictors a a. The ſame alſo appear in Fig. 8. p q r. p q r; a great part being there under the middle conſtrictors n n o; and the ſtylopharyngei v w. v w.

p p The inner grinding teeth.

The reſt may be known, upon occaſion, from Tab. X. Fig. 8.

FIGURE XXV.

The middle conſtrictors of the pharynx, in their back part.

a The upper point in which they meet.

b The lower point.

Betwixt which points the fibres meet in angles, pointing upwards from *c* to *a*; and more acute as they riſe higher, till they become direct at *c c*; from whence they deſcend and meet in angles that are more acute as they go lower.

Add here Fig. 24. *i i k*. and Fig. 23. *f g h*.

c c The ends of the horns of the os hyoides.

FIGURE XXVI.

The upper conſtrictors of the pharynx in their back part.]

a The lower part which tranſverſes the upper *b*.

c The part which ariſes at *d* from the inner ſide of the lower jaw, near the innermoſt grinding tooth.

e The portion that is cut off from the buccinator.

f The point in which the right and left portions meet together above.

Betwixt *f* and *g* their fibres meet in obtuſe angles.

Add here Fig. 24. *l m n o. l m n o.* and Fig. 23. *i*, &c.

h h The innermoſt of the lower grinding teeth.

FIGURE XXVII.

The ſtylopharyngei, palatopharyngei, and ſalpingopharyngei.

a The *ſtylopharyngeus.*

b The tendinous beginning ariſing at *c* from the inner, poſterior, and upper part of the bony portion, that is joined to the ſtyloide proceſs of the temporal bone, and which is moveable in young ſkulls.

g The ſuperior and leſs portion of this muſcle, which at *l* joins to the palatopharyngeus.

e The lower and larger portion, of which the part *f* is inſerted into the outer ſide of the edge of the thyroide cartilage, at the root of its upper proceſs: and the part *g* is inſerted into the ſubſequent portion of the edge of the ſaid cartilage, as far as the root of its lower proceſs.

Add here Fig. 28. *a*, &c. and Fig. 30. *a*, &c.

The *ſyſtematic connection* is ſeen in Tab X. Fig. 11. f, &c. Then in Fig. 10. l, &c. where it is in part covered by the upper conſtrictor of the pharynx a e e. Then in Fig. 9. o, &c. where it is alſo in part covered by the upper conſtrictor d, and by the middle one a. And in the ſame manner it is ſeen in Fig. 8. u, &c.

h l The *palatopharyngeus*.

h The part that is ſpread through the ſoft palate, above the elevators of the ſaid palate.

i Here it riſes out, near the poſterior edge of the palate bones, from the tendinous membrane that comes out of the noſtrils, and goes through the upper part of the ſoft palate.

Through the middle of the ſoft palate, the right and left ſtylopharyngeus are continued one into the other, almoſt from the poſterior edge of the palate bones to the root of the uvula.

k The part, which at its origin lying under the elevator of the ſoft palate comes out from the aponeuroſis of the circumflexus of the palate. See Fig. 29. *b*.

l Here the muſcle coming out from the ſoft palate, is incurvated through the ſide of the pharynx, and goes on through its back part, till it joins with the ſtylopharyngeus *d*.

Add here Fig. 28. *f*, &c. Fig. 29. and 30. *d*, &c. and Fig. 11. *f g*.

The *ſyſtematic connection* of the part that is in the pharynx appears in Tab. X. Fig. 11. e: and in Fig. 10. it lies behind the upper conſtrictor of the pharynx a. That of the portion in the palate appears in Tab. X. Fig. 13. n o p; where it lies partly hid behind the ſalpingopharyngeus q, and under the azygus of the uvula m.

m The common end of the ſtylopharyngei and palatopharyngei, running through the poſterior part of the membrane of the pharynx.

n o The meeting of the right and left fibres together, through the middle of the length of the pharynx *p o p* the place where they vaniſh in the back part of the membrane of the pharynx, and at *p p* are inſerted into the thyroide cartilage.

Add here Fig. 30. *i*.

The *ſyſtematic connection* appears in Tab. X. Fig. 11. o. Then in Fig. 10 *t*; where in its upper part it lies under the upper conſtrictor of the pharynx *a*. Then in Fig. 9 *s*; where it alſo lies under the middle conſtrictor *a*: and what there appears naked is in Fig. 8. covered by the lower conſtrictor *a*.

q The *ſalpingopharyngeus*: which joins itſelf to the inner part of the palatopharyngeus.

r Its origin from the lower and anterior part of the Euſtachian tube, where that is of a cartilaginous texture, near its extremity.

Add here Fig. 28. *k l*.

The *ſyſtematic connection* appears in Tab. X. Fig. 13. q.

The pharynx is here laid open in its upper part, by cutting out all that lies betwixt the baſis of the ſkull and the upper edge of the palatopharyngei.

s s The place from whence the back part of the pharynx is cut off.

t u v The Euſtachian tube, as yet covered at *t* with the membrane that lines the fauces internally; of which it is laid bare at *u*, upon which part lay the elevator of the ſoft palate. *v* the orifice that opens at the ſide of the poſterior foramen of the noſtril.

w The partition of the noſtrils, covered with its mucous membrane.

x x The cavity of the noſtrils.

y The lower os ſpongioſum, covered with the mucous membrane.

z z The place from whence is cut off the membrane that lines the cavity of the noſtrils internally.

The foregoing parts are the ſame as in Fig. 15. Tab. X.

a a The tendinous membrane, which coming out of the noſtrils, is ſpread over the upper ſide of the ſoft palate.

b The external ſide of the pterygoide proceſs of the multiform bone, with its little hook c, as in Tab. X. Fig. 16.

d The uvula as in Tab. X. Fig. 15.

e e The thyroide cartilage.

f The naked membrane of the lower part of the pharynx, to which part of the gula is continued; but is cut off at g.

The foregoing parts are the ſame as in Tab. X. Fig. 10.

h The ſtyloide proceſs of the temporal bone, as in Fig. 9. Tab. X.

FIGURE XXVIII.

The ſtylopharyngei, palatopharyngei, ſalpingopharyngei.

The whole back part of the pharynx being cut off from the top, and longitudinally from each ſide and removed, the internal part that then appears is here repreſented, with the internal membrane or covering alſo taken off, as in Tab X. Fig. 13. The cricoide and arytenoide cartilages with their epiphyſes or additaments are alſo removed here, as in Tab. X. Fig. 15.

a b c d e The *ſtylopharyngeus*.

b Its tendinous origin cut off at *c* from the ſtyloide proceſs of the temporal bone.

d The upper and leſs part of the ſtylopharyngeus, *e* its larger and lower part.

Add here Fig. 27. *a*, &c. and Fig. 30. *a*, &c.

The *ſyſtematic connection* appears in Tab. X. Fig. 13, r, &c. Fig. 14. p, &c, and Fig. 15. x, &c.

f g h The *palatopharyngeus*.

f The part that is ſpread through the ſoft palate above the elevator of the ſaid palate: and which with its fellow is continued through the whole middle length of the palate.

g The place where it goes off from the tendinous membrane that is detached from the noſtrils, and ſpread over the upper ſide of the ſoft palate.

h The part which at its origin lies under the elevator of the ſoft palate, and ſprings from the aponeuroſis of the circumflexus palati. See Fig. 29. *b*.

From *i* to *i* are cut off the portions of the palatopharyngei and ſtylopharyngei which run down the poſterior membrane of the pharynx, *l d e m* Fig. 27.

Add here Fig. 27. *h*, &c. Fig. 29. and Fig. 30. *d*, &c. and Fig 11. *f g*.

The *ſyſtematic connection* appears in Tab. X. Fig. 13. n o p: where, as here, it lies hid in part behind the ſalpingopharyngeus, and under the azygus uvulae m.

k The *ſalpingopharyngeus*, which joins itſelf to the inner part of the palatopharyngeus.

l Its origin from the anterior and lower part of the Euſtachian tube, which is of a cartilaginous nature, near its extremity.

Add here Fig. 27. *q r*.

The *ſyſtematic connection* appears in Tab. X. Fig. 13. q.

m The common end of the palatopharyngeus and ſalpingopharyngeus, which deſcends through the ſide of the pharynx, is protuberant within the ſame, and forms the poſterior arch that goes down from the ſoft palate through the ſide of the fauces.

Add here Fig. 29. *c*.

The *ſyſtematic connection* appears in Tab. X. Fig. 13. w.

n o Part of the common end of the ſtylopharyngeus and palatopharyngeus, ſpringing from the ſtylopharyngeus: of which the part *n* runs inward upon the lateral ligament of the epiglottis to the lateral edge of the epiglottis: and the part *o* is inſerted into the upper edge of the thyroide cartilage, betwixt its upper proceſs and the epiglottis.

Add here Fig. 29. *e f*.

The *ſyſtematic connection* appears in Tab. X. Fig. 13. x y. and Fig. 14. y z.

p The uvula.

q q The poſterior edges of the ſoft palate.

r r The tonſils.

s The tongue.

t The epiglottis.

u The thyroide cartilage.

The foregoing parts as in Tab. X. Fig. 15.

The remaining parts of this figure are the ſame as thoſe in Fig. 27.

FIGURE XXIX.

The palatopharyngei.

We have removed thoſe parts of them that are ſpread through the ſoft palate, above the elevators of the ſaid palate, *f g*. *f g* Fig. 28. The ſalpingopharyngei, *k k* Fig. 28. are alſo here taken off.

a The part that is ſpread through the ſoft palate under the end of the elevator of the ſaid palate: and which continues itſelf with its fellow, through the middle of the length of the palate.

b b The place where it ſprings from the aponeuroſis of the circumflexus of the ſoft palate.

The *ſyſtematic connection* is ſeen in Tab. X. Fig. 15. p, &c. Then in Fig. 14. w; where it is covered by the elevator of the ſoft palate k l.

c The part which deſcends through the ſide of the pharynx, is protuberant within the ſame, and forms the poſterior arch that goes down by the ſide of the fauces from the ſoft palate.

The *ſyſtematic connection* is ſeen in Tab. X. Fig. 15. t, and Fig. 14. x.

From *d* to *d* are cut off the portions of the palatopharyngeus and ſtylopharyngeus, which run through the back part of the membrane of the pharynx, *l d e m* Fig. 27.

e f Part of the common end of the ſtylopharyngeus and palatopharyngeus produced from the ſtylopharyngeus: of which the part *e* runs inward upon the lateral ligament of the epiglottis to the lateral edge of the epiglottis: and the part *f* is inſerted into the upper margin of the thyroide cartilage, betwixt its upper proceſs and the epiglottis.

The *ſyſtematic connection* appears in Tab. X. Fig. 15. v w.

Add here Fig. 28. *f g h i i m n o*: and Fig. 27. *h i k l m*. Fig. 30. *d*, &c. and Fig. 11, *f g*.

The reſt of this figure may be known in part from Fig. 27. and in part from Fig. 28.

FIGURE XXXI.

The ſtylopharyngeus, and palatopharyngeus on one ſide.

a The *ſtylopharyngeus* cut off at *b*. It is that marked *a b*, &c. in Fig. 27. and *a b*, &c. in Fig. 28.

c The portion of it that joins itſelf to the upper part of the palatopharyngeus, *d* Fig. 27.

The *ſyſtematic connection* is ſeen in Tab. X. Fig. 4. d e. Then in Fig. 2. w; where it is partly covered by the middle conſtrictor of the pharynx *b*, and what there appears naked, in Fig. 1. lies under the biventer of the lower jaw g.

d æ The *palatopharyngeus*, cut off at *æ*. It is that in Fig. 27. marked *l*.

The *ſyſtematic connection* appears in Tab. X. Fig. 4. f f; where (as here) it in part lies hid behind the ſtylopharyngeus d.

e The common end of the ſtylopharyngeus and palatopharyngeus.

f That part of the ſtylopharyngeus which is inſerted into the upper edge of the thyroide cartilage, betwixt its upper proceſs and the epiglottis. See Fig. 28. *n o*; and Fig. 29. *e f*.

g h Portions of the ſtylopharyngeus inſerted into the edge of the thyroide cartilage, the part *g* into the external ſide of its margin at the root of its upper proceſs; the part *h* into the reſt of the margin. They are thoſe marked *f. g.* Fig. 27.

i Part vaniſhing below in the membrane of the pharynx, marked *o p* in Fig. 27.

The *ſyſtematic connection* appears laterally in Tab. X. Fig. 4. g g h i k; where part lies hid behind the horn of the os hyoides w; part behind the ligament x, that goes from the end of the horn of the os hyoides to the upper proceſs of the thyroide cartilage; and part (as here) behind the thyroide cartilage y z. Then in Fig. 3. betwixt x y, and at *e*; where part alſo lies behind the horn *h* of the os hyoides, its ligament *i*, and the thyroide cartilage *k*: it is alſo there covered by the middle conſtrictor of the pharynx w x y, and the lower one z. Then in Fig. 2. it appears betwixt *b* and *c*, and at x; where beſides lying behind the hyoidal horn v, and its ligament, with the middle conſtrictor

of the pharynx *a b c*, and the lower one *d*, with the thyroide cartilage *i*, it is alſo behind the ceratogloſſus n. Then in Fig. 1, it appears betwixt *e* and *f*, and at p; where in like manner it lies behind the hyoidal horn n and its ligament, the middle conſtrictor *d e f*, the lower one *b*, and the thyroide cartilage; it moreover lies behind the hyothyreoideus q r.

Anteriorly it appears in Tab. III. *x* in the neck, where part of it appears naked betwixt the hyoidal horn *l*, its ligament *y*, the thyroide cartilage and the hyothyreoideus *t*, with the lower conſtrictor of the pharynx z, behind all which it is alſo placed. So alſo it appears in Tab. II. w in the neck; placed alſo behind the ſame hyoidal horn, and its ligament v, the thyroide cartilage, the hyothyreoideus Y Z, and the lower conſtrictor X. And what part of it has appeared naked in the fore mentioned tables, lies hid in Tab. I. behind the latiſſimus colli *O* in the neck.

k The membrane of the pharynx, with the membrane of the gula that is continued to it.

Muſcles of the Anus, Penis, Urethra and its Bulb, with the end of the Rectum, and the Anus.

FIGURE XXXI.

The elevators of the anus with the external ſphincter, a poſterior view.

a a—k The *levatores ani*, in ſome meaſure reſembling the ſhape of a funnel, and beſides the portions fixed to the os coccyx, they together form a ſort of tape, or ſwath, that is principally wound about the inteſtinum rectum, but is alſo attached by its extremities to the ſides of the pelvis, to the angles of the penis and the bulb of the urethra, as will be here pointed out. Beſides ſurrounding the rectum inteſtinum, it alſo takes in the lower part of the bladder with the ſeminal veſicles and proſtrate gland; alſo the vagina in women.

a a The anterior portions viewed on their inner ſide within the pelvis.

b c d Their origin from the inner ſide of the os pubis, at *b* near the lower end of the ſynchondroſis, from whence (the part *b c* is fleſhy, the part *c d* tendinous) it aſcends backward round the beginning of the obturator internus.

e The tendon which forms its upper edge, and ariſes in its higheſt part from the os pubis, and continues through the ſide of the pelvis, almoſt to the acute proceſs of the iſchium.

f Its origination from the acute proceſs of the iſchium.

g The poſterior part ſeen in its outer ſide.

h The place where it is inſerted behind into the anterior edge of the laſt, and laſt but one of the bones of the coccyx.

i i The tendinous ends that are continued to each other juſt below the coccyx, the fibres meeting together in angles that point upwards.

k The place where its fleſhy parts are continued.

Add here Fig. 32. *a—g a—g*, and Fig. 33. and 34.

The *ſyſtematic connection* appears in Tab. VI. e e in the lower part of the trunk, where they paſs under the external ſphincter of the anus f. Then, in Tab. V. *e* in the buttocks, where they alſo paſs under the outer ſphincter *g* of the anus, and are hid behind the largeſt glutei *c c*.

l l The *internal ſphincter of the anus.*

Add here Fig. 32. *l*.

The *ſyſtematic connection* is not repreſented.

m m The end of the inteſtinum rectum.

n The anus.

o o The ſynchondroſis, or cartilaginous juncture of the oſſa pubis *p p*.

FIGURE XXXII.

The elevators of the anus, with its internal ſphincter, ſeen from before.

a—g a—g The *levatores ani.*

a b c The origination from the inner ſide of the os pubis, the part *a* near the lower end of the ſynchondroſis; and from thence it is continued (partly fleſhy *a b*, partly tendinous *c*) upward and backward round the origin of the obturator internus.

d The tendon that forms the upper edge of this muſcle from the higheſt part of its origination at the os pubis through the ſide of the pelvis, almoſt to the acute proceſs of the iſchium.

e The thin portion that comes out from the angle *f*, where the head of the penis joins the ſpongy body of the urethra; it is alſo continued from along the upper part of the ſide of the bulb of the urethra, as far as *g*.

Add here Fig. 31. *a—k a—k*, and fig. 33. and 34.

The *ſyſtematic connection* of this part of it is not to be ſeen, as it is covered by the erectors of the penis *f f*, Tab. IV. in the trunk; and by the tranſverſe of the perinaeum *i i*.

h The bulb of the urethra, going into the ſpongy body of the urethra *i*.

k The urethra with its ſpongy body cut off.

l The *internal ſphincter of the anus.*

Add here Fig. 31. *l l*.

m m The end of the inteſtinum rectum.

n The anus.

o o o o o. o o o o o The places from whence portions of the oſſa pubis are cut out, to view the elevators that lie behind.

FIGURE XXXIII.

The left elevator of the anus viewed in its outer and lateral part.

a The tendon that forms its upper edge from the higheſt part of its origin at the os pubis, along the ſide of the pelvis, almoſt to the acute proceſs of the iſchium.

b c d Its origination from the inner ſide of the os pubis, partly tendinous *b c*, and partly fleſhy *c d*, where it paſſes round the origin of the obturator internus.

e The origin from the inner part of the acute proceſs of the iſchium.

f The thin portion that comes out of the angle of the oſſa pubis, wherein the head of the penis joins with the ſpongy body of the urethra, and is thence continued laterally to the upper part of the bulb of the urethra.

g Its inſertion into the anterior edge of the laſt but one, and the laſt *h*, of the bones of the coccyx.

i k The place where the fibres of one muſcle are continuous with thoſe of the other, below the coccyx.

Add here Fig. 34. and Fig. 31. *a—k*. and Fig. 32. *a—g*.

l l l The iſchium cut off, *m m m n* the os pubis, *n o o* the tubercle of the iſchium, which bone being cut out, the elevator comes into view.

FIGURE XXXIV.

The right elevator of the anus, a lateral view of its inner ſide.

a The tendon that forms its upper edge from the higheſt part of its origination at the os pubis, through the ſide of the pelvis, almoſt to the acute proceſs of the iſchium.

b c d Its origination from the inner ſide of the os pubis, (partly tendinous *b c*, and partly fleſhy *c d*) whence it goes round the origin of the obturator internus.

e Its origin from the inner part of the acute proceſs of the iſchium.

f The thin portion that comes out of the angle, in which the head of the penis joins with the ſpongy body of the urethra, and aſcends laterally to the upper part of the bulb of the urethra.

g Its inſertion into the anterior edge of the laſt but one, and the laſt *h*, of the bones of the coccyx.

i k The place where they are continuous with each other below the coccyx, tendinous at *i*, and fleſhy at *k*; from whence the left elevator is cut off.

Add here Fig. 33. and Fig. 31. *a—k*. and Fig. 32. *a—g*.

l The left os iſchium; *m* the os pubis.

FIGURE XXXV.

The external ſphincter of the anus, ſeen in its back part.

a The poſterior tip by which it adheres to the extremity of the coccyx, to which, from the anus *b*, the fibres meet together from each ſide in angles that point upwards, and are more acute as they aſcend higher.

Add here Fig. 36. *a b c c*.

The *ſyſtematic connection* appears in Tab. VI. f in the lower part of the trunk. Then, in Tab. V. *g* near the buttocks.

FIGURE XXXVI.

The external ſphincter of the anus, in its fore part.

a The fibres which meet together from each ſide, ſo as to form angles that point upwards; being more acute as they aſcend higher, and more obtuſe as they are lower.

b The tip or tail in which it ends, and at laſt vaniſhes in the perinaeum.

c c A portion that goes out above the foreſaid tip, into a ſort of triangular point that is attached to the lower part of the accelerators, where they are conjoined together.

Add here Fig. 35.

The *ſyſtematic connection* appears in Tab. IV. *b* in the trunk, where the tip, or tail, is hid by the declivity of a portion of the penis. Then in the ſame manner in the trunk of Tab. III. *l*.

d The bulb of the urethra going into the ſpongy body of the urethra *e*.

f The urethra, with its ſpongy body cut off.

FIGURE XXXVII.

The accelerators, tranſverſus, firſt and ſecond of the perinaeum, and the erectors of the penis.

a a b c c The *accelerators* inveſting the bulb of the urethra, where that is protuberant.

The one joins the other along the middle of the bulb *b*. And where they meet the fibres form angles, which are hardly to be perceived in the poſterior fibres, that meet almoſt in a direct courſe; the anterior fibres form angles more acute as they are farther from the poſterior ones.

c c The anterior tips, or points, by which they go off from the penis.

The reſt of the origination, from the middle of the upper ſide of the urethra, is not to be ſeen in the figure.

The *ſyſtematic connection* appears in Tab. IV. *g g* in the trunk, where it is partly covered by the external ſphincter of the anus *h*, partly by the tranſverſus of the perinaeum *i i*; in part by the erectors of the penis *f f*, and part from the declivity of the portion of the penis is not to be ſeen. Then, in Tab. III. *m* in the trunk, where part is in like manner covered by the external ſphincter *l*, and part by the erector penis *n*.

d The *tranſverſus of the perinaeum.*

e The end that joins partly with the accelerator, partly with the external ſphincter ani, and likewiſe uſually joins with its fellow.

Add here Fig. 38.

The *ſyſtematic connection* appears in Tab. IV. *i* in the trunk, where it goes under the external ſphincter of the anus *h*.

f The *ſecond tranſverſus of the perinaeum.*

i This bending its extremity to the erector penis, aroſe betwixt that and the accelerator, in the angle in which the head of the penis joins the bulb of the urethra.

Add here Fig. 39.

k l m. k l m The *erectors of the penis.*

l The tendinous end inſerted into the larger cavernous body of the penis at *m m*, beyond its head. But it is alſo inſerted into the head of the penis, where that does not lie under the oſſa pubis, almoſt all the way from the beginning of its ſaid head; and beyond the head it is inſerted as far as *m m*.

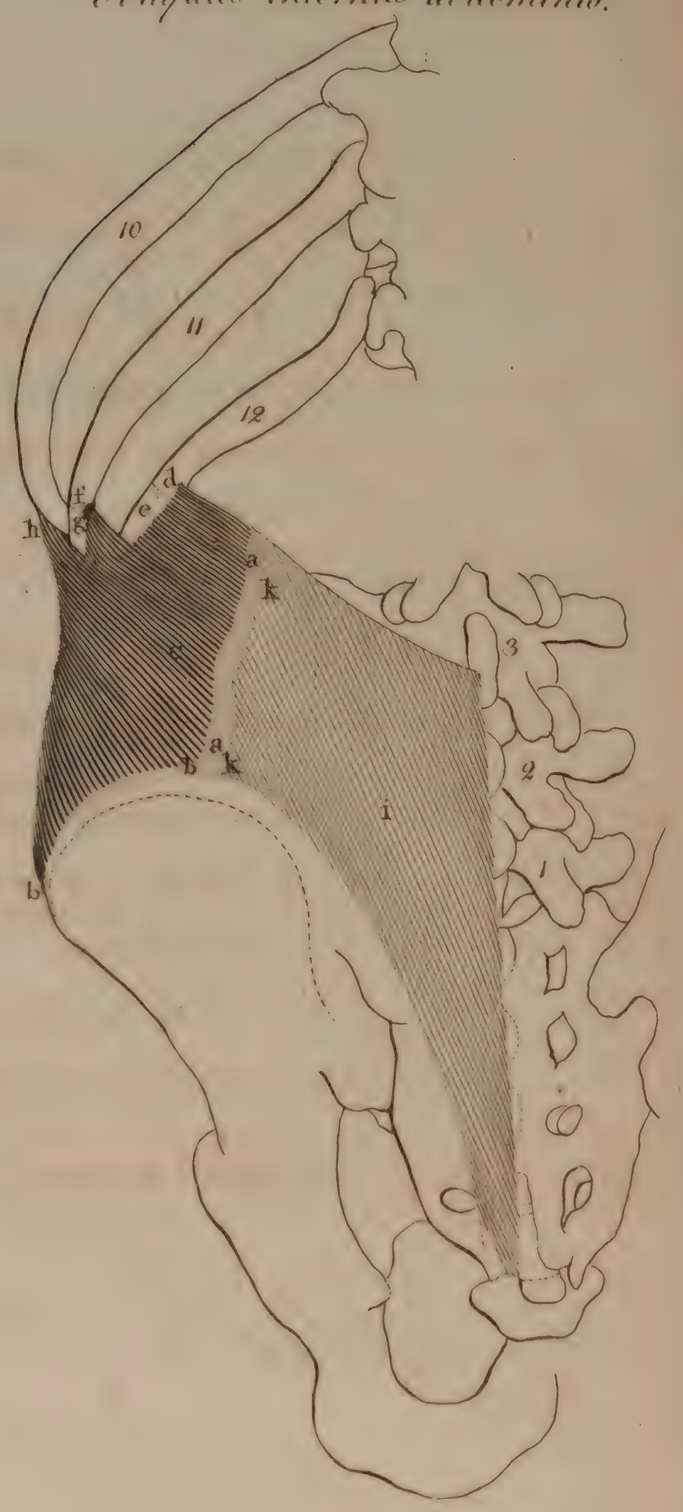
Add here Fig. 40.

TAB. XIII.

I.
Obliquus externus abdominis.

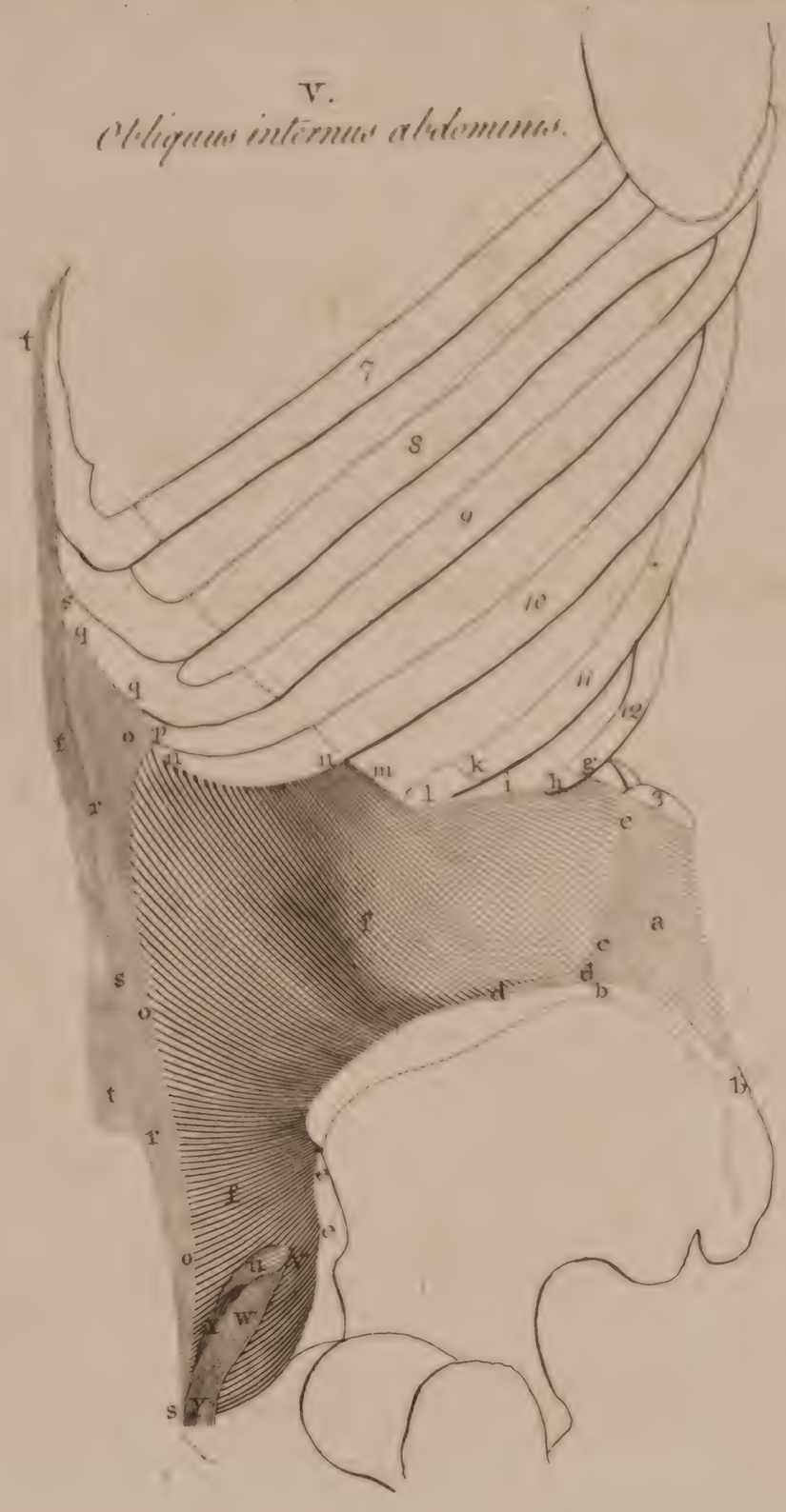
II.
Obliquus externus abdominis.

III.
Obliquus internus abdominis.

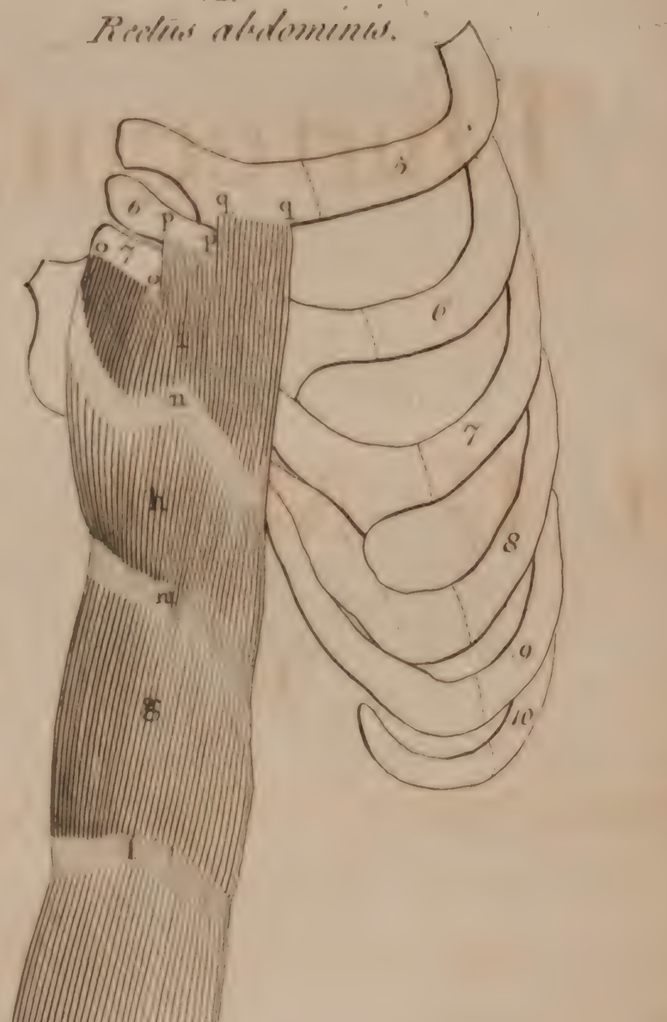


IV.
Obliquus internus abdominis, cum cremastere.

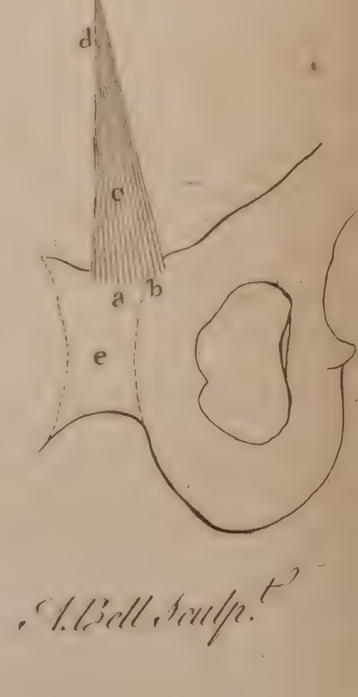
V.
Obliquus internus abdominis.



VI.
Rectus abdominis.



VII.
Pyramidalis.



A. Bell Sculp.

The *ſyſtematic connection* appears in Tab. IV. *f f* in the trunk, where its end is not to be ſeen for the declivity of the portion of the penis.

n n o The penis. *n n* the larger cavernous, or ſpongy bodies. *o* the ſpongy body of the urethra. *p* the penis cut off.

FIGURE XXXVIII.

The tranſverſus of the perinaeum in its poſterior part.

a Its origin from the inner part of the tubercle of the iſchium.

Add here Fig. 37. *d e.*

The *ſyſtematic connection* is in Tab. IV. h in the lower part of the trunk, where its end goes under the external ſphincter of the anus *g*, and lies hid behind the largeſt gluteus.

FIGURE XXXIX.

The ſecond tranſverſus of the perinaeum in its back part.

a Its origin from the inner part of the os pubis, near about the middle, betwixt the tubercle of the iſchium, and ſynchondroſis of the os pubis.

Add here Fig. 37. *f i.*

The *ſyſtematic connection* is in Tab. IV. g in the lower part of the trunk, where its end goes under the elevator e of the anus: And what is there naked in Tab. V. lies hid behind the largeſt gluteus *c*.

FIGURE XL.

The erector of the penis in its back part.

a The tendinous beginning which ariſes at *b b* from the inner ſide of the tubercle of the iſchium, a little before it ends in the os pubis.

Add here Fig. 37. *k l m.*

Muſcles of the Bladder.

FIGURE XLI.

The muſcle of the bladder, laterally.

This muſcle, although I have found it in but a very few bodies, I thought proper to exhibit here, on account of its elegance. Whether or no is it that which formerly ſeemed to belong to the proſtrate, called its Compreſſor?

a That part which aroſe from the inner ſide of the os pubis, almoſt in the middle ſpace betwixt the bottom edge of the ſynchondroſis and the uppermoſt part of the great foramen, or hole, near the inner part or the origin of the elevator of the anus.

b Its incurvation round the ſide of the bladder, gradually expanding itſelf a little above the proſtrate, till at

c c It at laſt becomes exceeding thin, and continues itſelf with the fibres of the bladder, or rather goes into them.

d The bladder.

e The proſtate.

f f The place from whence the left os pubis is cut off, and taken away with the reſt of the os innominatum, in order to expoſe this muſcle with the bladder and proſtate to the view.

T H E

Thirteenth Anatomical Table

OF THE

HUMAN MUSCLES

EXPLAINED.

Muſcles of the Abdomen and Teſticle.

Add here Tab. XIV.

FIGURE I.

The external obliquus of the abdomen, laterally.

a a The fleſhy part.

b c d d The firſt head. c the tendinous part of its origin. d d its origin from the fifth rib.

e f g g The ſecond head. f the tendinous part. g g its origin from the ſixth rib.

h i k k The third head. i the tendinous part. k k its origin from the ſeventh rib.

l m n n The fourth head. m the tendinous part. n n its origin from the eighth rib.

o p q q The fifth head. p the tendinous part. q q its origin from the ninth rib.

r s t t The ſixth head. s the tendinous part. t t its origin from the tenth rib.

u v w w x The ſeventh head. v the tendinous part. w w its origin from the eleventh rib. x the part which is connected with the beginning of the tranſverſe muſcle of the abdomen, there coming out from the ſaid tendinous part.

y z A The eighth head. z the tendinous part. A its origin from the twelfth rib.

The heads ariſe from the lower edge of each rib, with their ſides placed obliquely, and proceed forward and upward over the outer ſide of the rib towards its upper edge.

B B B B B C C D E E E E F F F G H H I K L M The tendinous expanſion.

C C The protuberance of the fleſhy part of the obliquus internus under the ſaid expanſion.

D The protuberance of the fleſhy part of the tranſverſus under the ſame, and alſo under the aponeuroſis of the internal obliquus.

E E E E The protuberance of the fleſhy body of the rectus.

F F F The places where the tendinous lines, or interſections of the rectus, appear through the aponeuroſes, or tendinous expanſions of the two obliqui.

G The protuberance of the pyramidalis under the ſame aponeuroſis.

H H I K The two portions into which the aponeuroſis divides itſelf, from whence it is continued, even to the pubes, under the appearance of diſtinct tendons; and betwixt them a ſlit, or aperture, is formed, through which paſſes the chord of the ſpermatic veſſels with the cremaſter muſcle.

K The place where the outer of the ſaid portions inſerts itſelf into a protuberance, that ſtands out in the upper and fore part of the os pubis, and into the adjacent ſpine that lies on the outer ſide of the ſaid protuberance: And partly it joins into the ligaments that lie on the inner ſide of the ſaid protuberance, and which inveſt the fore part of the ſynchondroſis, or cartilaginous juncture of the oſſa pubis.

The thin expanſion that goes from one of the foreſaid tendons to the o- and conjoins them together. Under that expanſion, the chord of the ſpermatic veſſels paſſes along, accompanied with the beginning of the cremaſter muſcle; which both come out at M.

N N The lower tendinous edge, extended from the anterior extremity of the ſpine of the ilium to the pubis.

O P An aponeuroſis, or tendinous part. P Q the part which is fleſhy, and in ſome bodies is extenuated into a tendinous end, inſerted along the upper and outer edge of the fore part of the ſpine of the os ilium.

R The aponeuroſis inſerted into the cartilage of the ſixth rib.

For the manner in which the upper part of the aponeuroſis is inſerted into the bottom of the ſternum, ſee Tab. I. *s* in the trunk.

Add here Fig. 2. following.

The *ſyſtematic connection* appears in Tab. IX. S, &c. in the trunk, where its upper part lies under the pectoralis H I; its heads under the ſerratus major N R O R P R Q, and under the latiſſimus dorſi *O* E D, and betwixt D and C.

FIGURE II.

The external obliquus of the abdomen, anteriorly.

a a The fleſhy body.

b c d d The firſt head. c the tendinous part. d d its origin from the fifth rib.

e f g g The ſecond head. f the tendinous part. g g its origin from the ſixth rib.

h i k k The third head. i the tendinous part. k k its origin from the ſeventh rib.

l m n n The fourth head. m the tendinous part. n n its origin from the eighth rib.

o p The fifth head. p its origin from the ninth rib.

q q q q r r s t t t t u u u v v w w x x y y z A B B B C D E F F F G H I K The aponeuroſis, or tendinous expanſion of this muſcle.

r r The part where the fleſh of the internal obliquus is protuberant under the ſame aponeuroſis.

s The place where the fleſh of the tranſverſe is protuberant under the ſaid aponeuroſis, and alſo under that of the obliquus internus.

t t t t The protuberances of the fleſhy portions of the rectus.

u u u u The appearances of the tendinous lines, or interſections of the rectus, through the aponeuroſes of the obliquus externus and internus.

v The protuberance of the pyramidalis under the ſame.

w w The lower tendinous edge, which goes from the extremity of the fore part of the ſpine of the ilium to the pubis.

x x y y The two portions into which the aponeuroſis divides itſelf, and is thence continued to the pubis, under the appearance of two diſtinct tendons: And, through this diviſion, or fiſſure, it is that the chord of the ſpermatic veſſels, with the cremaſter muſcle, paſs out to the ſcrotum; and, in women, it gives a paſſage to the round ligament of the uterus.

z The thin expanſion extended from one of the foreſaid tendons to the other, and connecting them together all the way from the place where they firſt divide, or recede from each other. Under this expanſion, the chord of the ſpermatic veſſels, and beginning of the cremaſter muſcle paſs along. And, below this, juſt above the pubes, the ſpermatic chord paſſes out through the ſmall oblique ring A of this tendon, being a ſpace left betwixt the expanſion z, the tendons xy, and the os pubis.

B B B, &c. Slender, remote tendinous threads, which croſs thoſe fibres of the aponeuroſis, that run in the ſame direction with the muſcle. Theſe compoſe the expanſion z, which runs from one tendon y y, to the other x x, at the pubes.

C The uppermoſt part of the aponeuroſis, inſerted into the fore part of the cartilage of the ſixth rib.

D The part which is inſerted into the fore ſide of the end of the cartilage of the ſeventh rib.

E The part inſerted into the bone of the enſiform cartilage.

E F F F The linea alba, in which the aponeuroſes of the two external oblique muſcles of the abdomen croſs each other, are intermixed, and alſo conjoined with the ſubjacent aponeuroſes of the internal obliqui.

G The opening in the linea alba, through which the umbilical veſſels paſſed out in the foetus.

H The place where the right and left aponeuroſes, running down from above, croſs each other, and are intermixed with the ligaments which inveſt the fore part of the ſynchondroſis of the pubis.

I The lowermoſt portion running down and mixing itſelf with the ligaments which inveſt the fore part of the ſynchondroſis of the pubis, and inſerting itſelf with them into the oppoſite bone of the pubes.

Add here Fig. 1.

The *ſyſtematic connection* appears in Tab. I. d, &c. in the trunk, where in its upper part its lies under the pectoralis *o* in the trunk, it head lies under thoſe of the ſerratus major z a b, then under the latiſſimus dorſi *t u*. Its poſterior part appears in Tab. V. W in the back, where it is partly covered by the latiſſimus dorſi P Q.

L. The ſynchondroſis, or cartilaginous juncture of the oſſa pubis, inveſted, or tied together in the fore part by ligaments.

FIGURE III.

The internal obliquus of the abdomen, in its back part.

a a The broad tendon which begins by aponeuroſes, the outermoſt of which lies under the broad tendon i of the latiſſimus dorſi, which is ſpread over and attached to it.

b b The tendinous beginning ariſing from the upper part of the ſpine of the ilium.

c The fleſhy part.

d e The extremity that is inſerted into the outer part of the lower edge of the twelfth rib. d part of the bony end of that rib. e the cartilaginous part.

f g The end inſerted into the outer part of the lower edge of the eleventh rib. f part of its bony end. g its cartilaginous extremity.

h The end that belongs to the tenth rib.

i The broad tendon by which the latiſſimus dorſi begins: which tendon ſee in Tab. XVIII. Fig. 2.

k k The place from whence the broad tendon of the latiſſimus dorſi is cut off, where that tendon no longer coheres with the broad tendinous beginning of the obliquus internus.

Add here Fig. 4. and 5.

The *ſyſtematic connection* appears in Tab. VI. M, &c. in the lower part of the trunk; whereas here it is covered at its beginning by the broad tendon U of the latiſſimus dorſi. And what part of it appears naked in that table, in Tab. V. lies under the latiſſimus dorſi P Q, and the external oblique muſcle, W in the back.

FIGURE IV.

The internal obliquus of the abdomen, with the cremaſter.

a The fleſhy part.

b The origin from the upper part of the ſpine of the ilium.

c c The margin that ſprings from the tendinous edge of the obliquus externus.

d d The fleſhy part inſerted into the lower margin of the cartilage of the tenth rib.

e e e The aponeuroſis as yet ſingle, before it reaches the rectus, and inſerted at f f into the lower part of the cartilage of the ninth rib.

g g g h The anterior lamella, or plate of thoſe two, into which the aponeuroſis divides near the rectus.

h The inſertion of the ſaid anterior lamella into the lower part of the ninth rib.

Betwixt the lower g and lower i, that part of the aponeuroſis that is below the middle ſpace betwixt the navel and ſynchondroſis of the pubis, continues ſingle, and is joined in its back part with the aponeuroſis of the tranſverſus, and together with that goes before the rectus.

i i i Here the anterior lamella or plate, continuous with the lower part of the aponeuroſis, which as yet continues ſingle, is cut off according to the length of the abdomen, in the part where it firſt joins itſelf with the aponeuroſis of the external obliquus; while the poſterior part or lamella of it continues to inveſt the abdomen as far as the linea alba. And above, the anterior lamella diſappears along the margin of the thorax in the aponeuroſis itſelf of the obliquus externus. Below, this aponeuroſis inſerts itſelf, with the aponeuroſis of the external obliquus, into the ſpine, tubercle, and ligaments of the pubis.

k k The poſterior of theſe two lamellae into which the aponeuroſis divides itſelf near the rectus; whence it paſſes behind the rectus. In the upper part of it ſome ſlender fibres appear croſſing its principal fibres.

l m n Its inſertion into the lower margin of the thorax, which is formed by the cartilages of the ſeventh and eigth ribs n m, and m l.

o p Its inſertion into the lateral margin of the bony part of the enſiform cartilage; and into the ſame ſide of that cartilage itſelf, at p q. q r its inſertion into the fore part of the cartilage not far from its point.

s s s Its termination in the linea alba.

t Part of the fleſh, under which runs the chord of the ſpermatic veſſels, a little protuberating and conſpicuous through the ſame. This portion runs afterward for ſome length upon the ſpermatic chord.

u The portion which ends in the beginning of the cremaſter; and behind which the ſpermatic chord y paſſes out.

Add here Fig. 3, and 5.

The *ſyſtematic connection* appears in Tab. II. M, &c. in the trunk; where the upper and larger part of the poſterior of thoſe plates (into which the aponeuroſis divides itſelf at the rectus,) lies hid behind the rectus Z Z, &c. and below the ſpermatic chord r, the beginning of the cremaſter q, goes down before it, as here. But in Tab. I. it lies behind the external obliquus d, &c. in the trunk.

v w x x The cremaſter muſcle.

w Its origin or beginning from the internal obliquus, from whence it joins itſelf to the chord of the ſpermatic veſſels.

x x Its lower extremity extenuated and inſerted into the vaginal tunica of the teſticle. But in other bodies we have found it terminating otherwiſe: See our hiſtory of the muſcles, Lib. III. Cap. 80.

Add here Fig. 5.

The *ſyſtematic connection* of the cremaſter appears in Tab. II. p q in the trunk: where, as here, part of it lies hid behind the chord of the ſpermatic veſſels, and teſticle. Then in Tab. I. z in the trunk; where the beginning lies hid behind the aponeuroſis of the external obliquus of the abdomen x.

y The chord of the ſpermatic veſſels.

z The ſynchondroſis of the oſſa pubis, conſtringed or tied together in their fore part by ligaments.

FIGURE V.

The internal obliquus of the abdomen, laterally.

a The outermoſt aponeuroſis of thoſe two by which it begins, and which lines the inner ſide of the broad tendon by which the latiſſimus dorſi begins; ariſing with that from the ſpines of the three lower vertebrae of the loins, and the following ſpines of the os ſacrum; alſo from the upper part of the ſpine of the ilium b b.

For the inner of thoſe aponeuroſes by which it begins, ſee Tab. XIV. Fig. 3.

c c The broad tendon in which its double aponeuroſis conjoins itſelf.

d d Its origin by a tendinous beginning from the upper part of the ſpine of the ilium.

e e The part which goes off from the margin of the external obliquus of the abdomen.

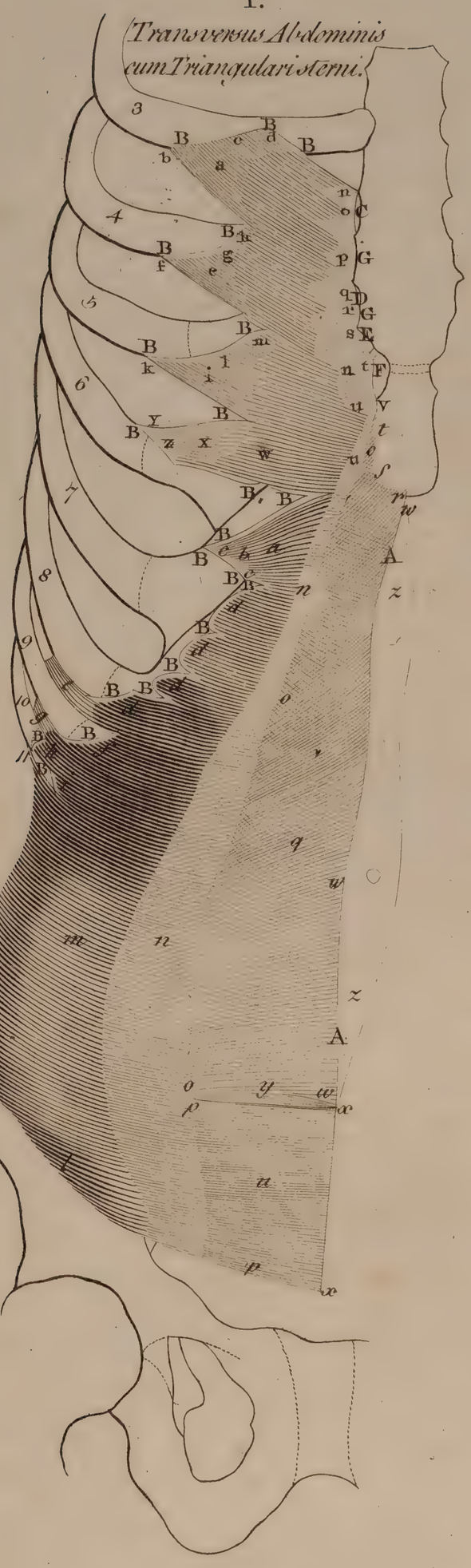
f f The fleſhy part.

g h Its inſertion into the outer part of the lower margin of the twelfth rib: as well into part of its bony extremity g, as its cartilage h.

TAB. XIV.

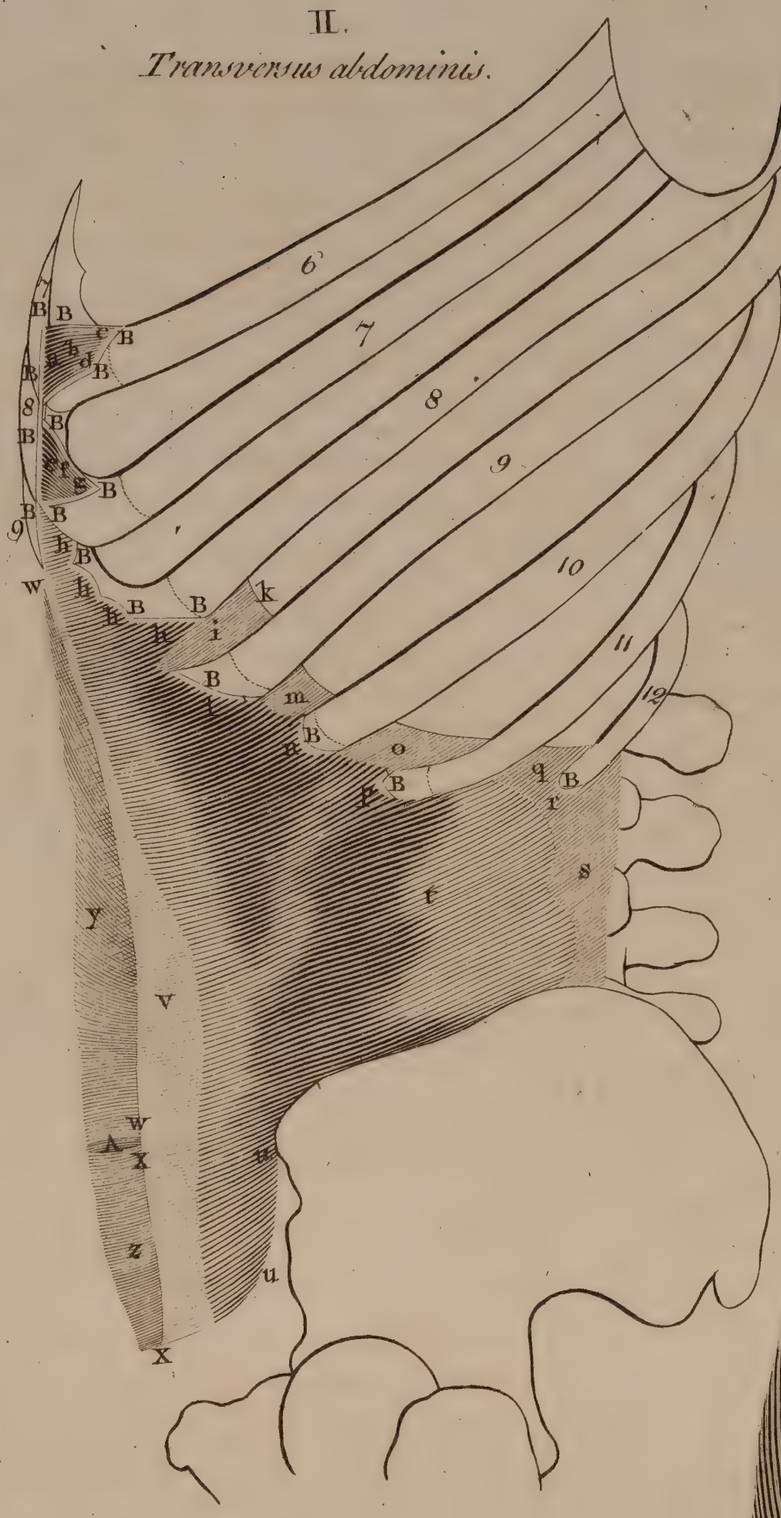
I.

Transversus Abdominis cum Triangulari sterni.



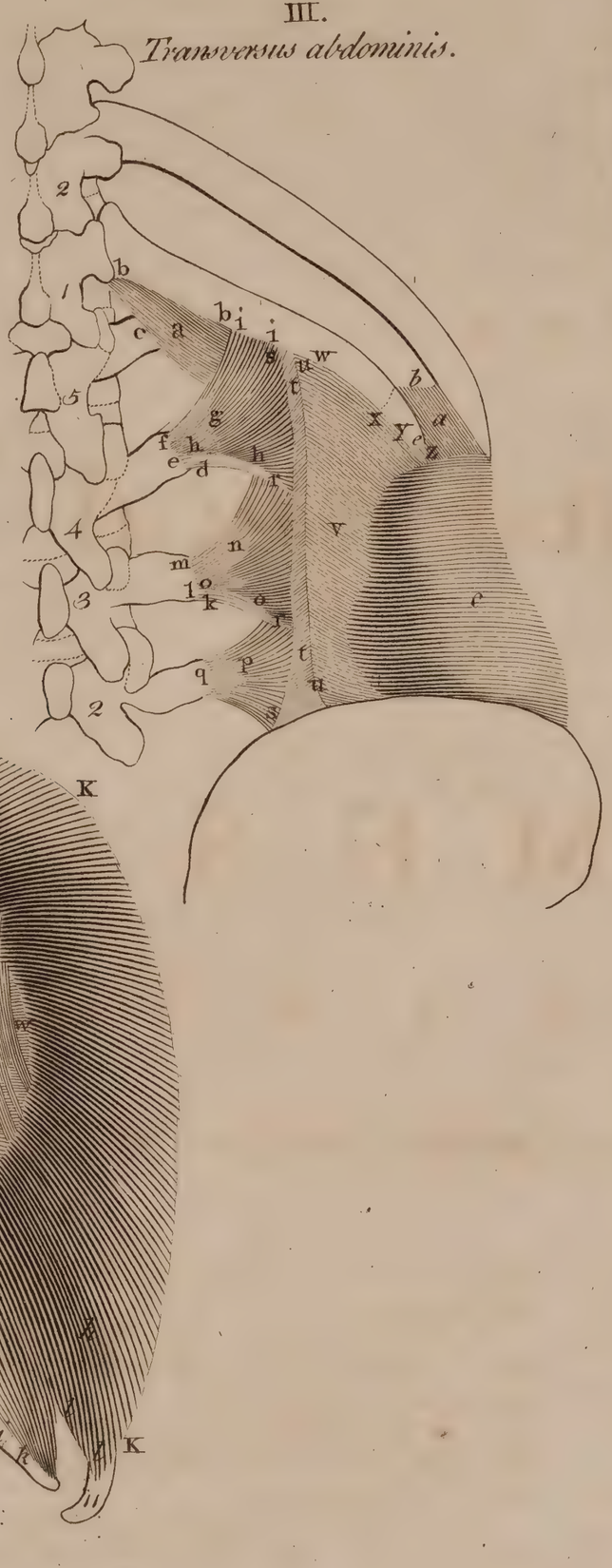
II.

Transversus abdominis.



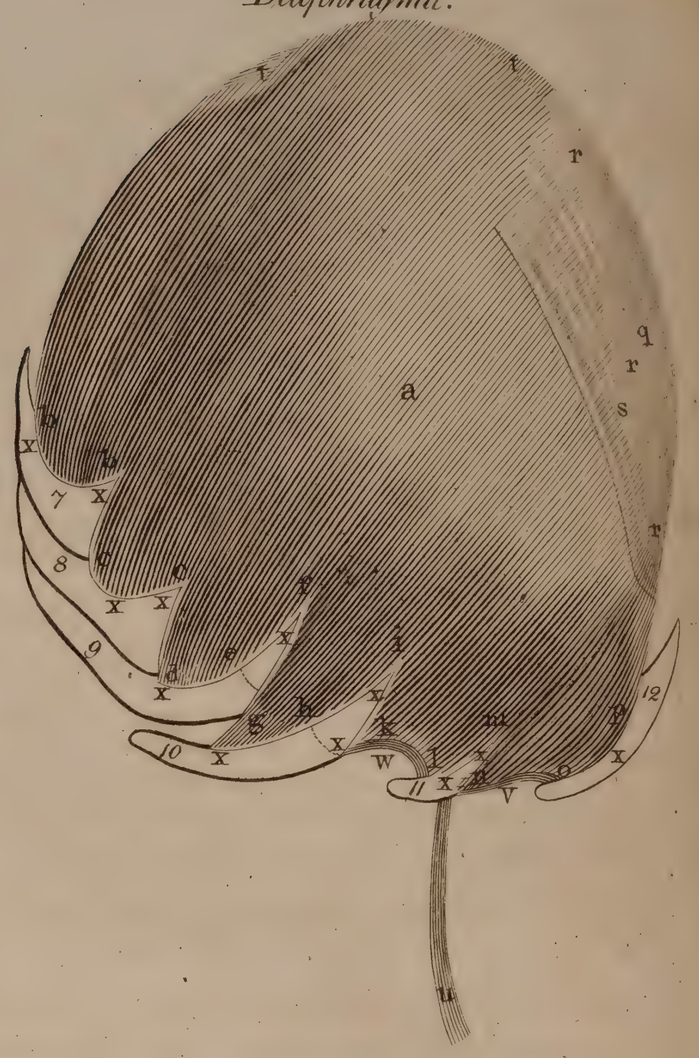
III.

Transversus abdominis.



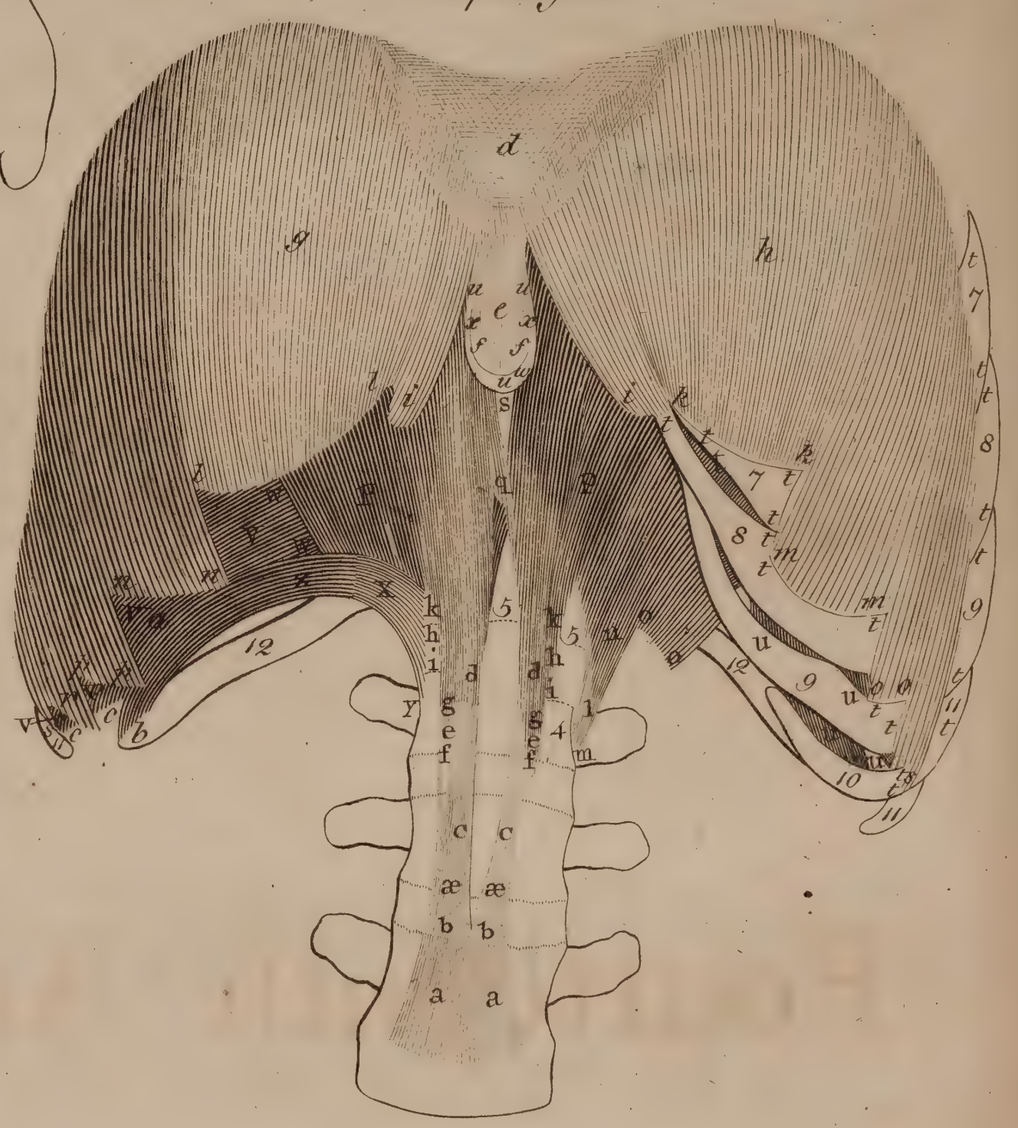
IV.

Diaphragma.



V.

Diaphragma.



VI.

Diaphragma.

VII.

Diaphragma.

A. Bell Sculp.

i The edge that goes along the ſide of the eleventh internal intercoſtal muſcle.

k l Its inſertion into the outer part of the lower margin of the eleventh rib: into the end of its bony part k, and its cartilaginous part l.

m The edge that aſcends along with the tenth internal intercoſtal muſcle.

n n Its inſertion into the lower part of the cartilage of the tenth rib.

o o o The aponeuroſis which is ſingle in this part, before it reaches the rectus. And here the margin of it at p aſcends along with the ninth internal intercoſtal muſcle, and is then fixed at q q into the lower margin of the cartilage of the ninth rib.

r r The anterior of thoſe two lamellae, into which the ſaid aponeuroſis divides itſelf near the rectus.

Betwixt the loweſt r and loweſt s, that part of the aponeuroſis that is below the middle ſpace betwixt the navel and ſynchondroſis of the oſſa pubis, continues ſingle, and is joined in its back part with the aponeuroſis of the tranſverſus, paſſing along with that before the rectus.

s s s Here the anterior lamella or plate, continuous with the lower part of the aponeuroſis, that as yet remains ſingle, is cut off according to the length of the abdomen, in the place where it firſt conjoins itſelf with the aponeuroſis of the external obliquus of the abdomen; the poſterior portion of it inveſting the abdomen even as far as the linea alba.

t t t t The poſterior of thoſe two lamellae, into which the aponeuroſis divides itſelf near the rectus, and which goes behind the rectus. In the upper part of this lamella, ſome ſlender tendinous threads croſs the principal fibres of it.

u Part of its fleſh, under which runs the chord of the ſpermatic veſſels, a little protuberant and conſpicuous through the ſame.

v The part that ends in the beginning of the cremaſter.

Add here Fig. 3. and 4.

The *ſyſtematic connection* appears in Tab. IX. where it lies behind the external obliquus of the abdomen S, &c. in the trunk, and behind the latiſſimus dorſi O A.

w The beginning of the cremaſter muſcle, going off from the internal obliquus.

x The chord of the ſpermatic veſſels.

y The cremaſter muſcle, with the chord of the ſpermatic veſſels cut off.

The *ſyſtematic connection* of the cremaſter muſcle appears in Tab. IX. l in the trunk; where its beginning lies hid behind the aponeuroſes of the external oblique muſcle of the abdomen f.

FIGURE VI.

The rectus muſcle of the abdomen.

a b c The principal tendon by which it begins, and which ſprings at b from the upper and fore part of the ligament, that inveſts or ties together the fore part of the ſynchondroſis of the oſſa pubis: and at c there is a ſmall portion ariſes from the adjacent os pubis.

d e The ſecond and longer tendon, by which it ariſes from the fore part of the ſame ligament, and conjoins into one with the tendon a.

f g h i The four fleſhy portions or bellies.

k The half tendinous line or interſection, that is below the navel.

l The tendinous line, that is in the umbilical region.

m The tendinous line, that is in the middle betwixt the navel and the place where the rectus firſt climbs upon the thorax.

n The tendinous line, that is ſeated where the rectus firſt aſcends, or is about to aſcend upon the thorax.

o o The extremity inſerted into the lower and next adjacent outer part of the cartilaginous end of the ſeventh rib.

p p The end that is inſerted into the outer part of the lower margin of the cartilage of the ſixth rib, near the middle of its length, and on the outer ſide of the former end.

q q The end that is inſerted into the outer and lower part of the cartilage of the fifth rib, almoſt where that cartilage begins, and on the outer ſide of the ſecond end.

The *ſyſtematic connection* appears in Tab. II. Z Z, &c. in the right ſide of the trunk; where at its origin it lies behind the pyramidalis l; in the left ſide alſo it is in part covered by the anterior of thoſe two lamellae, into which the aponeuroſis of the internal obliquus divides itſelf near the rectus; but beneath it lies the common aponeuroſis of the obliqui and tranſverſus, of which that part only can be ſeen here, that is formed by the anterior of thoſe lamellae, into which the aponeuroſis of the obliquus internus divides itſelf near the rectus, W X, &c. But in Tab. I. the reſt of it lies under the common aponeuroſis of the obliqui and tranſverſi, and then under the common aponeuroſis of the obliqui, of which that part only can be ſeen, which is formed by the aponeuroſis of the obliquus externus, o p, &c. in the trunk: and where it climbs upon the thorax only that of the aponeuroſis of the external obliquus can be ſeen: and laſtly under the aponeuroſis of the pectoralis muſcle *o* in the trunk.

r The ſynchondroſis of the oſſa pubis, conſtringed or tied together with ligaments.

FIGURE VII.

The pyramidalis muſcle of the abdomen.

a b The tendinous origin by which it ſprings from the upper part of the ligament, that ties together the fore part of the ſynchondroſis of the oſſa pubis; and from the next adjacent part of the os pubis at b.

c The fleſhy part.

d The broad extremity that belongs to the linea alba.

The *ſyſtematic connection* appears in Tab. II. l m in the trunk; where it is partly covered by the common aponeuroſis of the tranſverſus and obliqui, of which only the anterior of thoſe two plates can be ſeen, into which the aponeuroſis of the internal obliquus divides itſelf Y Q in the trunk. And what there appears naked (*i. e.* in Tab. II.) lies under the foreſaid common aponeuroſis in Tab. I. of which aponeuroſis only that part can be ſeen, which belongs to the external obliquus, q w in the trunk.

e The ſynchondroſis of the oſſa pubis, inveſted or conſtringed by ligaments.

THE
Fourteenth Anatomical Table
OF THE
HUMAN MUSCLES
EXPLAINED.

The remaining Muſcles of the Abdomen.

Add here Tab. XIII.

FIGURE I.

The fore part of the tranſverſus of the abdomen, with the triangularis of the ſternum.

a—v The *triangularis of the ſternum.*

a b c d The tendinous beginning of the head, which ariſes from the inner part of the third rib, from the end of its bony part b c, and beginning of its cartilaginous part c d.

e f g h The tendinous beginning of the head, which ariſes from the inner part of the fourth rib; from the end of its bony part f g, and from the beginning of its cartilage g h.

i k l m The tendinous beginning of the head, which ariſes from the inner part of the fifth rib, from the end of its bony part k l, and from the beginning of its cartilage l m.

n n The tendinous part which is formed by the fleſhy portion, that ariſes from the conjunction of the two upper heads; and which in ſome bodies is joined with the tendinous end of the lower head u u, and in others is ſeparate. It is inſerted into the inner part o of the extreme cartilage of the fourth rib,

and of the breaſt bone p, betwixt the ends of the cartilages of the fourth and fifth ribs, alſo of the extreme cartilage of the fifth rib q; of the breaſt-bone betwixt the ends of the cartilages of the fifth and ſixth ribs; alſo into the inner ſide of the cartilaginous end of the ſixth and ſeventh rib.

u u The tendinous end in which the fleſh of the third head terminates: inſerted at v into the edge of the bone of the enſiform cartilage. But the manner in which it continues to be inſerted into the reſt of the edge of that bone, as far as the enſiform cartilage, and into the edge of the ſaid cartilage itſelf, cannot be ſeen in this figure, becauſe the inner plate of the aponeuroſis belonging to the internal obliquus of the abdomen *q*, is here ſpread over it. But you may ſee Tab. X. Fig. 24. v w.

The *ſyſtematic connection* appears in Tab. III. x in the trunk, where its end is ſpread over the inner plate of the aponeuroſis of the internal obliquus of the abdomen s: and the reſt lies under the ribs, ſternum, and the internal intercoſtals, as the ſixth h, the fifth b, the fourth a, and the third Z. But what appears there naked, lies under part of the plate of the aponeuroſis belonging to the internal obliquus, here cut off. In its back part ſee Tab. X. Fig. 24.

w—*n* The *tranſverſus of the abdomen.*

w The firſt head ariſing tendinous from the inner part of the ſixth rib; from its bony end y, and its contiguous cartilage z. This head may be referred to the triangularis, as it joins ſooner and in a more ſimilar courſe with the lower head of that muſcle, than with the head which next follows it.

a The ſecond head ariſing tendinous at *b* from the inner part of the cartilage of the ſeventh rib *c c*.

d d d d The beginning that is ſplit into ſeveral portions (into four here) which ariſe from the inner part of the cartilage of the eighth rib *d d d d*.

e The aponeuroſis by which it comes from the ſpace betwixt the eighth and ninth rib. See Fig. 2. i.

f The origin from the inner part of the cartilage of the ninth rib.

g The aponeuroſis that comes from the ſpace betwixt the ninth and tenth rib. See Fig. 2. m.

h The origin from the inner part of the cartilage of the tenth rib.

i The origin from the inner part of the cartilage of the eleventh rib.

k The origin from the ſpine of the ilium.

l l The edge that ſprings from the tendinous margin of the external obliquus of the abdomen.

m The fleſhy part. *n n* the aponeuroſis in which it ends.

Add here Fig. 2. and 3.

The *ſyſtematic connection* appears in Tab. III. l—q in the trunk; where its heads lie under the ribs: the firſt of them under the fifth internal intercoſtal b, and ſixth h; the fourth under the eighth e, the fifth under the ninth f. The reſt in Tab. II. lies under the internal obliquus M, &c. in the trunk.

o o o The poſterior plate of the aponeuroſis of the internal obliquus cut off, where it firſt joins itſelf with the aponeuroſis of the tranſverſus, and with the tendinous end of the triangularis ſterni.

p p The aponeuroſis of the internal obliquus cut off, where it firſt joins itſelf with that part of the aponeuroſis of the tranſverſus, which goes before the rectus and pyramidalis.

q The poſterior plate of the aponeuroſis of the internal obliquus of the abdomen, ſpread over that part of the aponeuroſis of the tranſverſus which lies under the rectus; and together with that is inſerted at *r* into the fore part of the enſiform cartilage, near its tip; and into the lower part of the edge of the ſaid cartilage at *ſ*; alſo into its upper edge and bony edge *t*, joined with the tendinous end of the triangularis ſterni.

Add here Fig. 2. and Tab. XIII. Fig. 4.

u The aponeuroſis of the internal obliquus where it is ſingle, and ſpread over that part of the aponeuroſis of the tranſverſus, which goes before the rectus and pyramidalis.

Add here Fig. 2. and Tab. XIII. Fig. 4.

w w w x x The inſertion of the aponeuroſis of the tranſverſus, (with the aponeuroſis of the obliquus internus that is ſpread over it) into the linea alba,

y The fiſſure or opening in the aponeuroſis of the tranſverſus, about its middle part, betwixt the navel and ſynchondroſis of the pubis: and this is formed by a tranſverſe ſeparation of the aponeuroſis, extended to the linea alba, by which the upper part of the aponeuroſis, that goes behind the rectus, is ſevered from the lower, that goes before the rectus and pyramidalis. The rectus therefore paſſes thro' this fiſſure, to the ſize and figure of which it correſponds. But there is alſo found a thin continuation of the aponeuroſis behind the lower part of the rectus, in ſome thicker, in others thinner, and in ſome more or leſs in a manner diſcontinued, and more or leſs in its breadth.

z z The linea alba, from whence at A A is cut off the aponeuroſis of the obliquus externus, with the anterior lamella or plate of the aponeuroſis of the obliquus internus.

B, &c. the ribs here cut off; C D E F the cartilages of thoſe ribs, C of the fourth, D of the fifth, E of the ſixth, F of the ſeventh; G G the breaſt-bone cut off, to ſhew the triangularis and tranſverſus that are ſeated behind it.

FIGURE II.

The tranſverſus of the abdomen, laterally.

a b c d The firſt head. a the fleſhy part. b the tendinous beginning ariſing from the ſixth rib; from the end of the bony part c, and from its contiguous cartilage d.

e f g The ſecond head. e the fleſhy part. f the tendinous beginning ariſing at g from the inner part of the cartilage of the ſeventh rib.

h h h h The beginning that is ſplit into ſeveral (here four) parts, ariſing from the inner part of the cartilage of the eighth rib h h h h.

i The aponeuroſis that comes from the ſpace betwixt the eighth and ninth rib, from the inner ſurface of the internal intercoſtal, and partly from the ninth rib itſelf. k the part cut off; for it has a longer thin origin.

l The origin from the inner part of the cartilage of the ninth rib.

m The aponeuroſis that comes from the interval betwixt the ninth and tenth rib, like i.

n The origin from the inner part of the cartilage of the tenth rib.

o The aponeuroſis that comes from the interval betwixt the tenth and eleventh rib; like i.

p The origin from the inner part of the cartilage of the eleventh rib.

q The aponeuroſis that comes from the interval of the eleventh and twelfth rib; like i.

r The origin from the inner part of the extreme cartilage of the twelfth rib, tendinous.

s The broad tendon by which it begins in the loins. t the fleſhy part.

u u The edge that comes from the tendinous margin of the internal obliquus of the abdomen.

v The aponeuroſis in which the fleſh ends.

Add here Fig. 1. and 3.

w w The poſterior lamella of the aponeuroſis of the internal obliquus cut off, *o o o* Fig. 1.

x x The aponeuroſis of the internal obliquus cut off, *p p* Fig. 1.

y The poſterior lamella of the aponeuroſis of the internal obliquus, *q* Fig. 1.

z The aponeuroſis of the internal obliquus where it remains ſingle, *u* Fig. 1.

A The ſlit in the aponeuroſis of the tranſverſus, *y* Fig. 1.

B B, &c. The ribs here cut off, to ſhew the tranſverſus that is ſeated behind them.

FIGURE III.

The tranſverſus of the abdomen, in its back part.

a—r The origins of the broad tendon, by which the tranſverſus begins, together with the origins of the inner plate, which being common to the aponeuroſis of the internal obliquus and lower poſterior ſerratus, ſprings from the tranſverſe proceſſes of the ſecond, third, and fourth vertebra of the loins.

The *ſyſtematic connection* appears in Tab. VII. where they lie under the communis capitis, ſacrolumbalis, and longiſſimus dorſi, *d e* in the trunk.

a The tendinous head of the tranſverſus, which ariſes at b b from the outer part of the lower edge of the twelfth rib, and at c from the poſterior extremity of the tranſverſe proceſs of the fifth vertebra of the loins.

d e f g h h i i The tendinous head which ariſes at e f from the poſterior part of the end of the tranſverſe proceſs of the fourth lumbal vertebra. g is a thin tendon ſpread over it, and ariſing with it from the tranſverſe proceſs at f, and alſo at h h goes off from the head itſelf, and is inſerted at i i into the outer part of the lower edge of the twelfth rib.

k l m n o o A like tendinous head which ariſes at l m from the outer part of the end of the tranſverſe proceſs of the third lumbal vertebra. n a thin tendon like the former, with which it is covered, and ariſes with it at m, but departs from it at o o.

p q The tendinous head, upon all of which is ſpread the thin tendon, ariſing with it at q from the back part of the end of the tranſverſe proceſs of the ſecond lumbal vertebra.

r r The place where the fibres croſs each other, and are interwove in a manner too obſcure to be repreſented; but chiefly in this manner as in the body whence this figure was taken; varying more or leſs in others

s s The part whence is cut off the outer plate of the aponeuroſis, common to the ſerratus poſticus inferior, and the internal obliquus of the abdomen.

t t The aponeuroſis common to the poſterior lower ſerratus, and internal obliquus, cut off at u u, where it no longer coheres with the broad tendon by which the tranſverſus begins.

v The broad tendon by which the tranſverſus begins, adhering to the lower edge of the twelfth rib; to its bony part w x, and its cartilage x y to the tip.

z The origin from the inner part of the cartilage of the twelfth rib, beginning tendinous.

a The aponeuroſis q, Fig. 2. here cut off at *b*.

c The fleſhy part.

Add here Fig. 2. and 1.

The *ſyſtematic connection* appears in Tab. VII. Y Z in the trunk; where in part it lies under the aponeuroſis, common to the poſterior lower ſerratus, and internal obliquus of the abdomen *c c*; and under the tenth internal intercoſtal X. But what there appears naked in Tab. VI. lies hid behind the poſterior lower ſerratus C K, and the internal obliquus M N in the trunk.

e The cartilage of the twelfth rib cut off.

FIGURE IV.

The diaphragm, laterally.

a The ſecond fleſhy portion of the left ſide, that goes into the left lateral end.

b b Its end inſerted into the inner part of the cartilage of the ſeventh rib.

c c That which is inſerted into the inner part of the cartilage of the eighth rib.

d e f That to the inner ſide of the ninth rib, its cartilaginous part d e, and its bony part e f. d the tendinous part of this end.

g h i That to the inner part of the tenth rib, to its cartilaginous part g h, and its bony part h i. g the tendinous part of this end.

k l m That which in part belongs k l to the ligament w, and in part l m is inſerted into the inner ſide of the bony part of the eleventh rib, near its cartilage. l the tendinous part.

n o p That whoſe part n o belongs to the ligament v, and part o p is inſerted into the inner ſide of the twelfth rib: Into its cartilage o, and its bony part o p. o the tendinous portion.

q r r r s The aponeuroſis marked p—s, Fig. 7. here q r r r denote the tendinous part, r r r s the fleſhy part.

t t The middle tendon of the diaphragm.

u The large left head, a æ b c Fig. 5.

Add here Fig. 5. 6. and 7.

v The ligament that is extended almoſt from the tip of the cartilage of the twelfth rib, to the bony part of the eleventh near its cartilage.

w The ligament that is extended almoſt from the beginning of the cartilage of the eleventh rib, to the bony part of the tenth rib near its cartilage.

x, &c. The ribs cut off to ſhew the diaphragm that is ſeated behind them.

FIGURE V.

The diaphragm in its fore part.

a æ b c d. a æ b c d The two firſt heads, of which the left is leſs than the right. a a the thin tendinous part which ariſing from the ligaments that run along the ſurface of the bodies of the lumbal vertebrae, joins the diaphragm outwardly. æ æ here theſe heads ariſe beneath with thick tendons at c c from the lower part of the body of the third vertebra of the loins, and particularly from the ſides of its fore part. In others as here, at b b they ariſe from the upper part of the body of the ſecond vertebra. Some have theſe tendons on each ſide divided into two; others have fleſhy portions on each ſide, as at d d in which the ſaid tendons enter on the outer ſides. The beginnings which uſually join theſe heads from behind them are not here viſible, as they lie underneath them.

e f g. e f g The ſecond head ariſing tendinous at e e from the ligament f, that is interpoſed betwixt the bodies of the third and fourth vertebra of the loins. g g the fleſhy portions in which they end.

h i k. h i k The third head ariſing tendinous at h h, from the ſides of the upper margin of the body of the fourth lumbal vertebra. k k the fleſhy parts in which they end.

l m n The fourth head of the left ſide. l the tendinous beginning, ariſing at m from the fore part of the root of the tranſverſe proceſs of the fourth lumbal vertebra. n the fleſh in which it ends.

o o A beginning that is ſometimes found, ſpringing from the ſurface of the quadratus lumborum.

p p The firſt fleſhy portion of the diaphragm formed by the conjunction of its heads.

q A portion of the firſt left head that joins the fleſhy part of the firſt on the right ſide, and afterwards runs along through the right ſide of the hole, by which the gula, or oeſophagus, comes out of the thorax.

r Part of the firſt right head, which going along behind the portion q croſſes the ſame, and goes into the firſt left fleſhy portion; ſo that it occaſions a croſſing of many of the faſciculi, or bundles of fibres.

s The hole through which the oeſophagus comes out of the thorax into the abdomen.

t Part of its middle tendon.

u u u u The ſecond fleſhy part on the left ſide. See Fig. 6.

v v v v w w The ſecond fleſhy part on the right ſide, climbing over the firſt at w w, croſſing the ſame, and ſoon after becoming tendinous.

x y z *a b* A portion as I have ſometimes found it in one, and ſometimes in both ſides, forming the lower margin of the diaphragm on this ſide; and which here ariſes (but differently in others) from the tranſverſe proceſs of the fourth lumbal vertebra y, and alſo from the fifth; and firſt tendinous at x, (but differently both in ſubſtance and figure in various bodies) then fleſhy at z, and joining the ſecond fleſhy portion v, unites with the ſame behind *a*, and is inſerted at *b* into the cartilage of the twelfth rib.

c c The margin cut off, which is marked C C in Fig. 6.

d The anterior point of the middle tendon in which it ends, and wherein the fibres croſs each other.

e The middle fleſhy end which is extended along the inner part of the enſiform cartilage almoſt to its end *f f*.

g h The two ſecond fleſhy portions, which go into two lateral ends.

i i The extremities of them which connect themſelves to the peritonaeum.

k k The end inſerted into the inner part of the cartilage of the ſeventh rib. It is cut off from thence at *l l*.

m m That inſerted into the inner part of the cartilage of the eight rib. It is cut off from thence at *n n*.

o o That inſerted into the inner part of the cartilage of the ninth rib. It is cut off from thence at *p p*.

q That inſerted into the inner part of the cartilage of the tenth rib. It is cut off from thence at *r*.

s s The ends inſerted into the inner part of the cartilage of the eleventh rib.

Add here Fig. 6. 7. and 4.

The *ſyſtematic connection* appears in Tab. IV. M—o in the trunk; where the left fourth head lies in part under the pſoas magnus t; the right under the pſoas parvus r, and the magnus t; the firſt head in part under the great pſoas, betwixt v and w.

t t, &c. Here the ribs are cut off, to ſhew the diaphragm that lies behind them.

u u u The enſiform cartilage cut off. *w* its cartilage, *x x* its bony part.

FIGURE VI.

The poſterior part of the diaphragm, viewed from before.

a æ b c d. a æ b c d The two firſt heads, as in Fig. 5.

e f g. e f g The ſecond heads, e f g. e f g Fig. 5.

h i k. h i k The third heads, as in Fig. 5.

l m n The left fourth head, as in Fig. 5.

o o The beginning, ſo marked in Fig. 5.

p The firſt left fleſhy portion of the diaphragm; q the right, formed by a conjunction of the heads, and at length occupying the whole poſterior lunated edge of its tendon.

r r The part which comes from the tranſverſe proceſs of the fourth lumbal vertebra, as at l m n; but it goes behind the part D E F, as in Fig. 7. e f.

s A portion of the firſt left head joining the firſt right fleſhy part, q Fig. 5.

t Part of the firſt right head, going into the firſt left fleſhy part, r Fig. 5.

u The hole in the firſt fleſhy part, through which the gula paſſes.

v The upper angle of that hole, where the right and left fibres croſs each other; the right being anterior.

w w w x y The left part of the middle tendon. x part of the tendon climbing over the reſt w, and croſſing it. y a portion that runs over the part x, croſſes it, and goes into the lower part of the ſecond left fleſhy portion.

z A certain aponeuroſis that is ſtretched round the lateral tendon from the fleſh, which is at the poſterior point of the left tendon, coming forwards and croſſing the fibres of the tendon, and ending forwards in the anterior fleſhy portion.

a Part of the aponeuroſis v x x x, Fig. 7. penetrating to the lower part of the tendon, and receiving (when it has penetrated) a portion from the lower part of the tendon, near the left opening for the gula; it bends to the right, and goes above the ſaid foramen at *b* to the fore part of the right fleſhy end; and in part runs at *c* along the anterior edge of the hole for the cava, and joins itſelf to the aponeuroſis *t*.

d A portion joining the aponeuroſis *a*, and coming from the firſt left fleſhy portion near the beginning of the tendon.

e e f f g Tendinous fibres which come out at *e e* from the tendon w, and backwards is partly interwove with the tendon *f f*, and partly continued on *g*.

h h Part of the ſecond left fleſhy portion to which the tendon w w w x y goes.

i k Its end inſerted into the lower part of the twelfth rib into its bony part *i*, and its cartilage *k*.

l l The edge cut off where it was joined to the tranſverſus of the abdomen betwixt the two laſt ribs; but otherwiſe it ariſes from the ligament v, Fig. 4.

m m m The right portion of the middle tendon formed by the firſt right fleſhy part.

n The broad aponeuroſis coming from the fleſh at the poſterior point of the right tendon, and continued to the firſt fleſhy portion *o p*, but coming out from the tendinous fibres *p q* near the ſecond, whence it goes forwards croſſing the fibres of the tendon; and, in the fore part at *r r* partly interweaves itſelf with the tendon, partly ends in the anterior fleſh *s s s*, and partly runs on along the right ſide of the hole for the cava.

u u u The aponeuroſis *m m m m*, Fig. 7. penetrating (near the bottom of the hole for the cava) to the lower part of the tendon; and afterwards bending itſelf round the left ſide of that hole, goes to its edge. Behind it runs thro' the anterior point of the tendon.

x The ſame as marked A, Fig. 7.

y The tendinous part into which the firſt right fleſhy part joins, and croſſes the left in the upper angle of the hole through which the gula paſſes, and which afterwards runs behind the tendon *b*, and then along the lower part of the tendon *z*.

A The tendinous margin that belongs to the back part of the hole through which the vena cava paſſes, formed chiefly by that part of the tendon which goes to the right from the firſt fleſhy portion to the ſecond. It is marked B, Fig. 7.

B B The ſecond right fleſhy portion in which the tendon *m m m* ends.

C C Its margin cut off, marked *l l* in the left ſide.

D E F G H The portion x—*b* in Fig. 5. E its origin, D the tendinous part, F the fleſhy part, conjoined at G with the ſecond fleſhy portion B, and inſerted at H into the cartilage of the twelfth rib.

I The hole in the tendon through which the vena cava paſſes.

K K K K The anterior part of the diaphragm cut off from this circumference.

Add here Fig. 5. 7. and 4.

FIGURE VII.

The diaphragm, in its back part.

a b The two firſt heads.

c d, e f The ſecond heads. c. e the tendinous origins. d. f the fleſhy parts.

g The beginning marked o o, Fig. 5.

h Part of the firſt right head that joins the firſt left fleſhy portion.

i The fleſh that is formed by part of the firſt right head, joined with a portion of the firſt right head q, Fig. 5. and Fig. 6.

k l The firſt fleſhy parts, k the right, l the left.

m Part of the firſt left fleſhy portion croſſing the right in the upper angle of the hole through which the gula paſſes.

n The hole in the firſt fleſhy part through which the gula paſſes.

o o o The left part of the middle tendon, formed of the firſt fleſhy part.

p, &c. The broad aponeuroſis, which being gradually formed by the fleſh at the ſide of the broad tendon p p p, thence along the lateral edge of the tendon, and through the beginning of the ſecond fleſhy portion betwixt p p p q and r r r; and through the tendon betwixt r r r and s s s it goes to the poſterior tip of the tendon, and paſſing round the ſame, it continues itſelf partly beneath at t to the firſt fleſhy portion, and partly goes on at v along the poſterior lunated edge of the tendon: And at x x x penetrates into the lower part of the tendon, and forms *a*, Fig. 6. at laſt it runs to the right at w along the upper part of the hole for the cava. at u u the faſciculi croſs each other.

y The broad aponeuroſis, which ariſing from the firſt left fleſhy portion, comes out here at v from under the aponeuroſis z z; and being for a long way conjoined at s s s with the aponeuroſis p p p q r r r s s s, then departs from it, and runs partly at *a* along the upper edge of the hole for the cava joined with the aponeuroſis w; and partly runs forward through the upper ſide of the tendon *b*.

c c The left ſecond fleſhy part in which the tendon o o o ends.

d Its margin cut off, marked *l l* in Fig. 6.

e Its end which it inſerts into the twelfth rib; *i k*, Fig. 6.

f The right part of the middle tendon formed by the firſt fleſhy portion.

g g g h, &c. The broad aponeuroſis, which being gradually formed by the fleſh of the ſide of the broad tendon, by a thin aponeuroſis *g g g*, is thence continued along the lateral edge of the tendon, chiefly through the beginning of the ſecond fleſhy part betwixt *g g g h* and *i i i*; and through the tendon betwixt the lower *i i* and *k k*, it paſſes to the poſterior tip of the tendon, and paſſing round it goes along the poſterior lunated edge of the tendon *l*: and in its courſe penetrates to the lower part of the tendon, and forms *u u u* in Fig. 6. at laſt it ends in the lower part of the foramen for the cava at *n*, and partly bends itſelf to the right of the hole for the cava at *o*. *p* the place where the fibres croſs each other

q r r s s t t u u u u Certain portions detached in a manner from the foreſaid aponeuroſis, running through the tendon, and joining themſelves thereto at *u u u u*. Here at *t t* the faſciculi croſs each other.

w w w Tendinous faſciculi, which coming out of the tendon, run forwards through it.

x A tendinous bundle coming out of the tendon, and belonging to the second fleshy portion y.

z Is the same with w in Fig. 6.

A Part of the tendon here belonging to the edge of the hole through which the cava passes. It is marked x, Fig. 6.

B The tendinous edge belonging to the back part of the hole through which the vena cava passes. It is formed chiefly by that principal tendinous part that goes to the right from the first fleshy portion to the second. It is marked A, Fig. 6.

C The hole in the tendon through which the vena cava passes.

D D The second right fleshy portion into which goes the tendon f.

E E Its margin cut off, marked C C, in Fig. 6.

F The end of the portion marked D E F G H in Fig. 6.

Add here Fig. 6. 5. and 4.

The *systematic connection* appears in Tab. VIII. m in the loins, where part of it is covered by the quadratus lumborum l.

But it ought to be observed here, once for all, that there being many and great varieties to be found in the structure of the diaphragm, we were obliged to single out this one.

THE

Fifteenth Anatomical Table

OF THE

HUMAN MUSCLES

EXPLAINED.

Muscles of the Spine.

FIGURE I.

The multifidus of the spine.

a The head which arises all the way from the third spinal process of the os sacrum, as far as the tubercle of the said bone, that is formed by the concretion of the fourth oblique descending process, with the oblique ascending process of the fifth vertebra, and from the said tubercle itself of the os sacrum.

The other three heads which arise from the tubercles, formed by the concretion of the oblique descending process of the third vertebra of the os sacrum, with the ascending process of the fourth vertebra, of the second descending with the third ascending, and of the first descending with the second ascending processes; these heads I say cannot be seen in this figure, because they lie under the muscle.

b c The head which arises partly at b from the eminence which the os sacrum has in its back, at the outer side of the second and third of its holes; and partly at c, from the ligament that is extended from the foresaid eminence to the lower part of the said bone.

d The part that lies under the os ilium, from whence it arises in this place.

e The tendinous excursion of the head that arises from the oblique ascending process of the first vertebra of the os sacrum. f a like excursion from the ascending process of the first lumbal vertebra. g that from the process of the second. h that from the third. i from the fourth. k from the fifth. l that from the upper part of the end of the transverse process of the first vertebra of the back.

m The tendinous head arising from the transverse process of the second vertebra of the back; and that from the upper and posterior part of the end of the said process.

n The like tendinous head which arises from the upper and posterior part of the transverse process of the third dorsal vertebra, betwixt its root and the root of the tubercle in which it ends. o a like head arising in like manner from the process of the fourth dorsal vertebra. p the like from the fifth. q from the sixth. r from the seventh. s from the eighth. t from the ninth. u from the tenth. v from the eleventh. w from the twelfth.

x The like head arising from the upper and posterior part of the oblique descending process of the second vertebra of the neck. y the like from the third. z from the fourth.

a The tendinous end which inserts itself into the lower edge of the spine (near its extremity) of the first or lowermost vertebra of the loins. *b* that to the second. *c* to the third. *d* to the fourth. *e* to the fifth. *f* to the first of the back. *g* to the second. *h* to the third. *i* to the fourth. *k* to the fifth. *l* to the sixth. *m* to the seventh. *n* to the eighth. *o* to the ninth. *p* to the tenth. *q* to the eleventh. *r* to the twelfth. *s* that to the first, or lower vertebra of the neck. *t* that to the second. *u* to the third. *w* to the fourth. *x* to the fifth. But, from these terminations, all the foresaid portions continue to insert themselves beneath into the lower edge of each vertebra as far as their oblique descending processes, as is represented in the uppermost extremity *y z*.

y z The uppermost tendinous end, inserted into the sixth vertebra of the neck; first into the lower edge of the spine near its extremity at *y*, and thence as far as the oblique descending process *z*, terminating outwardly tendinous.

The course of the heads and tails of these portions, and the conjunction of their fibres are externally, as they appear in the figure.

And, in the end that belongs to the sixth vertebra of the neck, appears the manner in which the portions from several heads, belonging to one and the same vertebra, meet together as it were at one tail, before they terminate or insert themselves. For the end *y z* that belongs to the said vertebra, is formed the three heads marked z. y. x; and that portion of it that comes from the nearest head z, is inserted just by the oblique process *z*; next to this the portion is inserted from the next lower head y; and next to that again at *y*, is inserted the portion from the next head x, each of them coming near the end of the spinal process as they are removed lower from the head. The same is also to be understood of the rest, of which only the long portions appear outwardly, as the shorter lie immediately under the longer portions.

Add here fig. 2.

The *systematic connection* appears in Tab. VIII. 14. 14. in the left side; where its uppermost end is covered by the lower obliquus capitis, k l in the head and neck. Then at 14. 14. in the right side, where it is also covered by the spinalis colli 2. and semispinalis dorsi, p in the back. Then in Tab. VII. x in the trunk, where, except that part, it is covered all the way by the common head of the longissimus dorsi and sacrolumbalis, *d e* in the trunk, and the longissimus dorsi itself, *S* in the trunk; and by the spinalis dorsi, i in the trunk; and the complexus, u in the neck. But that part which is there naked in Tab. V. lies under the gluteus magnus, *c* in the buttock.

FIGURE II.

The multifidus of the spine, laterally.

We have here exhibited that portion of it which is in the loins and next adjacent part of the back, in order to show what could not be seen in the first figure.

a The part which comes from the os sacrum, from the ligament detached from that bone to the os ilium, and from the os ilium itself; a b c d Fig. 1.

b The tendinous head that comes from the oblique ascending process of the first vertebra of the os sacrum. The beginning of which head lying behind the os ilium cannot be seen in this figure. But it arises from that process in the same manner as the next head c does from the oblique ascending process of the first lumbal vertebra.

c d The tendinous head arising at d from the edge of the oblique ascending process of the first vertebra of the loins, near the outer side of the ob-

TAB. XV.

I.
Multifidus spinæ.

III.
Longissimus dorsi cum Sacrolumbali et Cervicali descendente.

IV.
Sacrolumbalis cum Cervicali descendente

V.
Longissimus dorsi.

VI.
Longissimi dorsi et Sacrolumbalis.

VII.
Spinalis dorsi.

X.
Intertransversarii lumborum.

XI.
Interspinalis lumborum.

VIII.
Semispinalis dorsi.

IX.
Intertransversarii dorsi.

XII. *Quadratus lumborum.* XIII.

II.
Multifidi spinae.

XIV.
Psoas parvus.

A. Bell Sculp.t

lique deſcending proceſs of the ſecond vertebra, to which it is attached as it aſcends.

e f The like tendinous head from the oblique aſcending proceſs of the ſecond lumbal vertebra f.

g h The like from the oblique aſcending proceſs of the third lumbal vertebra.

i k The like from the oblique aſcending proceſs of the fourth lumbal vertebra.

l m The like from the oblique aſcending proceſs of the fifth, or uppermoſt vertebra of the loins.

n The tendinous end that belongs to the ſpine of the ſecond lumbal vertebra. o that to the third. p to the fourth. q to the fifth r that to the ſpine of the firſt, or lowermoſt vertebra of the back. s that to the ſpine of the ſecond.

t The place where it is cut off.

u v w x y z *a b c* Portions which may be either referred to the multifidus, or reckoned diſtinct muſcles. Each of them is inſerted into two of the lumbal vertebrae that are next to each other; and the uppermoſt of them is inſerted into the lowermoſt vertebra of the back, and the fifth, or uppermoſt of the loins.

u v The firſt that ariſes at u from the outer part of the root of the oblique aſcending proceſs. Inſerts itſelf at v into the lower part of the root of the tubercle, that projects betwixt the tranſverſe and the oblique aſcending proceſs; alſo into the lower part of the edge of that oblique proceſs itſelf. The reſt are diſpoſed in the ſame manner.

w x The ſecond. w its origination. x its inſertion.

y z The third. y the origin. z the inſertion of it.

a b The fourth. *a* its origination. *b* its inſertion.

c The fifth. *c* its origin.

But the ſecond of them w x only can be entirely ſeen, ſince the ends of the reſt are hid behind the tranſverſe proceſſes; the fifth has its whole upper end hid; and the firſt, at its origin, lies in part behind the os ilium.

Add here Fig. 1.

Muſcles of the Back and Loins.

FIGURE III.

The longiſſimus dorſi, ſacrolumbalis, and cervicalis deſcendens.

a b The *common head* by which the longiſſimus dorſi and ſacrolumbalis ariſe. a the tendinous part. b the fleſhy part.

c d e The origin of that head from the criſta, or edge of the os ilium, fleſhy at c, tendinous at d e. e f the part that coheres with the gluteus magnus. g h the tendinous part which ariſes from the two upper protuberances, at the opening in the end of the channel of the os ſacrum. h i the tendinous part diſcontinued, formed by the tendons ariſing from the ſpines of the two lower lumbal vertebrae, and all the ſpines of the os ſacrum.

k l m Tendons which ariſe from the ſpines of the lumbal vertebrae, k of the third, l of the fourth, m of the fifth.

n The diviſion of the common head into the longiſſimus dorſi and ſacrolumbalis.

o The *longiſſimus dorſi*.

p The tendinous portion of the common head, joined with that which comes from the tendons i k l, and runs through the longiſſimus dorſi externally.

q The tail aſcending through the neck and forming the tendon r, which at laſt joins with the tendon of the cervicalis deſcendens E E. And at the ſame place it goes off in another tendon, belonging to the lower part of the end of the horn of the poſterior tranſverſe proceſs of the third vertebra of the neck.

The portion given by the tendon r to the trachelomaſtoideus, Tab. VII. *O* in the neck, is here cut off.

Add here Fig. 5. and 6.

Under this lies partly the ſacrolumbalis s. See Fig. 5.

s The *ſacrolumbalis*.

t u v, &c. Its tails belonging to the ribs; of which t. w. z. *c. f. i. m. p. ſ* denote the fleſhy parts; u. x. *a. d. g. k. n. q. t. w. y* the tendons in which they end. Theſe tendons are inſerted into the ribs; v in the eleventh, y to the tenth, *b* to the ninth, *e* to the eighth, *h* to the ſeventh, *l* to the ſixth, *o* to the fifth, *r* to the fourth, *u* to the third, *x* to the ſecond, *z* to the firſt. The tail that belongs to the twelfth, ſee in Fig. 6. t.

They are inſerted into the bottom part of the rough ſurface that is in the outer ſide of the rib not far from the ſpine, and into the bow itſelf of each rib; except the two uppermoſt belonging to the two upper ribs, which are inſerted near the tubercle *x. z*, to which is affixed the ligament tying the rib to the tranſverſe proceſs of the vertebra. And that belonging to the firſt rib is inſerted in the like part *z*, and alſo into the tranſverſe proceſs of the uppermoſt vertebra of the back.

Add here Fig. 4.

A The *cervicalis deſcendens*.

B The tendinous excurſion of that head of it, which ariſes from the ſixth rib. See Fig. 4.

C C C. D D. E E Its three tendinous tails, which bend themſelves round the ſubjacent muſcles, and end C C C in the ſecond vertebra of the neck, D D in the third, E E in the fourth; at the bottom of the end of the horn of each of their tranſverſe proceſſes. Thoſe to the fourth E E are conjoined with the tendon r of the longiſſimus dorſi.

Under the origin of this muſcle lies the ſacrolumbalis. See Fig. 4. z.

Add here Fig. 4.

The *ſyſtematic connection* appears in Tab. VII. *d—O* in the trunk, and D in the neck, where the laſt tendon of the longiſſimus dorſi is conjoined with the tendon of the cervicalis deſcendens, and bends itſelf behind the tranſverſalis of the neck, C C in the neck. Then in Tab. VI. *k—u* in the trunk, and X in the neck; where the greater part is covered by the broad tendon, by which ariſe the ſerratus poſticus inferior and internal obliquus of the abdomen; over which is ſpread the broad tendon U by which the latiſſimus dorſi begins; covered alſo by the ſerratus poſticus inferior C D, the rhomboides major p p q, the ſerratus poſticus ſuperior æ b, and the levator ſcapulae Z. And what appears naked in the right ſide of that table, the ſame is in Tab. V. covered by the latiſſimus dorſi P, and the cucullaris B in the back; except a ſmall part there marked M.

FIGURE IV.

The ſacrolumbalis with the cervicalis deſcendens.

a b c d e f g h i k l The tendinous tails of the ſacrolumbalis cut off, which were ſeen entire in the third figure u. x. &c. where under them are concealed portions coming from the ribs.

m The portion that joins the ſacrolumbalis from the twelfth rib. n that from the eleventh, o from the tenth, p from the ninth, q from the eighth, r from the ſeventh rib.

s s, &c. The tendinous beginnings by which thoſe portions ariſe from the ribs, from their back part a little nearer the ſpine, than where the tails of the ſacrolumbalis are inſerted.

t u v w x The heads of the cervicalis deſcendens, of which t ariſes from the ſixth rib, u from the fifth, v from the fourth, w from the third, x from the ſecond.

y y, &c. The tendons by which thoſe heads begin and ariſe from the back part of the ribs, a little nearer the ſpine than where the tails of the ſacrolumbalis are inſerted. Theſe tendons ſoon produce fleſhy portions, which run to a greater length inwardly than what appears outwardly.

z The cervicalis deſcendens ſo conjoined with the ſacrolumbalis, that it appears a continuation of it, namely of thoſe portions which it receives from the ribs.

a The tendinous excurſion of the firſt head, namely of that which comes from the ſixth rib t. But in other bodies it does not run to ſo great a length.

b b c. d d e f f g Three tendinous tails of the cervicalis deſcendens, which bend themſelves round the ſubjacent muſcles; and belong *b b* to the ſecond vertebra of the neck, *d d* to the third, *f f* to the fourth; and inſert themſelves into the poſterior and lower part of the horn of their tranſverſe proceſſes *c e g*.

h The longiſſimus dorſi here cut off. See Fig. 3. n o. From whence alſo the reſt of this figure may be known.

Add here Fig. 3.

FIGURE V.

The longiſſimus dorſi.

a The longiſſimus dorſi.

b c d e f g h i The tails which are here moſtly tendinous, and inſerted into the outer ſide of the ribs, ſoon after their departure from the tranſverſe proceſſes. b that inſerted into the tenth. c to the ninth. d to the eighth. e to the ſeventh. f to the ſixth. g to the fifth. h to the fourth. i to the third. But they grow broader as they aſcend, and lie partly under each tail next following. Thoſe inſerted into the eleventh and twelfth ribs do not appear, becauſe they lie under the muſcle.

l The laſt of thoſe tails which it inſerts into the tranſverſe proceſſes of the vertebrae of the back, ending by a long tendon l, in the poſterior and lower part of the end of the tranſverſe proceſs m, and the next part of the adjacent firſt rib n.

o The tail aſcending through the neck, and here dividing itſelf into two tails, which form the tendons p p q. r s, which bend themſelves round the ſubjacent muſcles. The one of them p p inſerts itſelf at q into the poſterior and lower part of the end of the horn of the tranſverſe proceſs of the fourth vertebra of the neck; the other r s, into the ſame part of the third vertebra at s.

t The ſacrolumbalis cut off from hence.

Add here Fig. 3. and 6.

The remaining parts of this figure are the ſame as in Fig. 3.

FIGURE VI.

The longiſſimus dorſi and ſacrolumbalis.

The longiſſimus and ſacrolumbalis are here cut off with their common head, leaving behind thoſe portions which the common head inſerts into the vertebrae of the loins and into the laſt rib; alſo thoſe which the longiſſimus gives to the tranſverſe proceſſes of the vertebrae of the back, except that to the uppermoſt; thoſe portions are alſo left which go to the longiſſimus. All which either lie under the common head, or under the longiſſimus.

a b c d e f g h i k Five tails cut off from the common head; of which a b is inſerted into the lower protuberance that is near the back part of the root of the tranſverſe proceſs of the firſt vertebra of the loins; c d to the ſecond, e f to the third, g h to the fourth (which is inſerted into the lower edge of the back part of the oblique aſcending proceſs of the fourth vertebra at h), i k to the fifth. Of theſe b, d, f, h, k denote the tendinous parts by which they inſert themſelves.

l m n o p q r s The five tails cut off from the common head; of which l m are inſerted into the lower margin of the back part of the tranſverſe proceſs of the firſt vertebra of the loins, at the end of the ſaid proceſs; n o to that of the ſecond, p q to that of the third, r to the fourth, s to the fifth. The two lower of theſe end in tendons m, o; the middle one is in part tendinous at q; the two upper are wholly fleſhy.

t The broad portion which the common head of the ſacrolumbalis (whence it it is cut off) here, inſerts itſelf at u u into the lower edge of the outer part of the laſt rib. At its origin it is conjoined with the portion s, belonging to the end of the tranſverſe proceſs of the fifth vertebra of the loins.

v w x y, &c. The tails of the longiſſimus, which it inſerts into the tranſverſe proceſs of the vertebrae of the back, at the lower and back part of their extremity. v w that inſerted by the longiſſimus dorſi into the firſt vertebra in the back, where w denotes the tendinous end by which it is inſerted. x y that to the ſecond, of which y denotes the tendinous end by which it is inſerted. z *a* that to the third, of which *a* denotes the tendinous end by

which it is inſerted. *b c* that to the fourth, which is firſt ſplit into two, and inſerted by the common tendinous end *c*. *d e* that to the fifth, which is alſo firſt ſplit in two, before it is inſerted by the common tendinous end *e*. *f g* that to the ſixth, in like manner ſplit into two, and then forming the common tendinous end *g* by which it is inſerted. *h i* that to the ſeventh, inſerted by the tendinous end *i*. To the eighth belongeth two tails with tendinous ends *k l*; and the like to the ninth *m n*. To the tenth belongeth only one, inſerted into it by the tendinous end *o*. The like to the eleventh *p*. All which are cut off from the longiſſimus dorſi. That tail which belongs to the tranſverſe proceſs of the twelfth dorſal vertebra, and the firſt rib, ſee in Fig. 5. l m.

q r ſ t The tendinous beginnings of the heads which join to the inner part of the longiſſimus dorſi, ariſing at *q r ſ t* from the upper and back part of the tranſverſe proceſſes of the firſt, ſecond, third, and fourth dorſal vertebra, from near the edges of the ſaid proceſſes. *u u u u* the places where they are cut off.

Add here Fig. 3. and 5.

Muſcles of the Back.

Add here the interſpinalis dorſi like thoſe of the loins in Fig. 11. which ſee.

FIGURE VII.

The ſpinalis of the back.

a b c d e Five tendons by which it ariſes from the ſpines of the two upper vertebrae of the loins, and three lower of the back. The lower of them a, which ariſes from the fourth vertebra of the loins, is the longeſt and thickeſt; the next b, from the uppermoſt vertebra of the loins, is ſhorter and more ſlender; the other c, is ſtill ſhorter and thinner than that, and comes from the firſt vertebra of the back; the fourth d, comes from the ſecond vertebra of the back; the uppermoſt e, from the third vertebra of the back is the ſhorteſt and ſlendereſt. They all at length end in

f The fleſhy body.

g h i k l m n The ſeven tails in which the fleſhy body ends. Theſe tails are firſt fleſhy and afterwards tendinous at g h i k l m n where they go to the ſpines of the ſeven dorſal vertebrae which follow next after the uppermoſt, and are inſerted at the edges almoſt of their extreme ends or tips. The lower one is the ſhorteſt and ſlendereſt; thoſe next above are longer and larger as they are ſeated higher in order. The tendinous ends are alſo longer and more conſiderable, as the tails from whence they ariſe are higher in order. g that belonging to the ſpine of the fifth vertebra of the back, h to the ſixth, i to the ſeventh, k to the eighth, l to the ninth, m to the tenth, n to the eleventh.

The *ſyſtematic connection* appears in Tab. VII. i in the trunk. Then in Tab. VI. *a* in the back, where a great part is covered by the ſerratus poſticus inferior C, the rhomboides major p p q, and ſplenius colli V in the left ſide. And what appears naked in that table, is in Tab. V. covered by the latiſſimus dorſi P, and the cucullaris B in the back.

FIGURE VIII.

The ſemiſpinalis dorſi.

a b c d e f g h Four heads which are for a long way tendinous at a c e g, and which ariſe from the poſterior and upper part near the ends of the tranſverſe proceſſes of the third b, fourth d, fifth f, and ſixth vertebra h of the back. The tendons are ſhorter as they are placed higher in order.

i The fleſhy body.

k l m n o p q The ſeven tendons of the tails in which it ends, belonging to the lower part of the ſides of the ſpines of the five upper vertebrae of the back, and two next of the neck, not far from the ends or tips of their ſpines; k that to the ſpinal proceſs of the eight dorſal vertebra, l to the ninth, m to the tenth, n to the eleventh, o to the twelfth; p to the firſt or lowermoſt of the neck, q to the ſecond. They are longer as they go higher. But the upper tails, contrary to what they are, appear narrower in the figure on account of the perſpective.

The *ſyſtematic connection* appears in Tab. VIII. p in the back. Then in Tab. VII. a b c d e g h; where the reſt is covered by the ſpinalis dorſi i, by the longiſſimus dorſi *S*, and the biventer cervicis h in the neck. Then in Tab. VI. z in the back, where it is alſo covered by the ſplenius colli U V, and the ſplenius capitis P in the neck; and what there appears naked, in the right ſide, lies behind the rhomboides major, p p q in the back.

FIGURE IX.

The intertranſverſarii of the back.

a b The firſt which ariſes at a from the fore part of the tranſverſe proceſs of the firſt dorſal vertebra, and inſerts itſelf into the lower and back part of the tranſverſe proceſs of the ſecond vertebra of the back.

c d The ſecond which ariſes at c from the upper and back part of the tranſverſe proceſs of the ſecond dorſal vertebra, and is inſerted into the lower and back part of the third tranſverſe proceſs.

e The third, f the fourth, g the fifth, h the ſixth, i the ſeventh, k the eighth, l the ninth. All which ariſe and are inſerted like the ſecond.

The lowermoſt of them are the largeſt; thoſe which follow are ſmaller, and ſlenderer, and leſs fleſhy as they go higher; the uppermoſt of them being ſo ſlender and tendinous that they rather reſemble ligaments than muſcles.

The *ſyſtematic connection* appears in Tab. VIII. f g h i k l m n o in the back in the left ſide. In the right ſide h denotes the third, i the fourth, k the fifth, and l the ſixth, in part covered by the ſemiſpinalis dorſi q r s t; m the ſeventh, n the eighth, o the ninth; 3. 4. 5 the ſpinalis colli. And what there appears naked in Tab. VII. lies under the longiſſimus dorſi, *S* in the trunk.

Muſcles of the Loins.

FIGURE X.

The intertranſverſarii of the loins.

a b The firſt, which ariſes from the upper part of the tranſverſe proceſs of the loweſt vertebra of the loins, not far from the end of its ſaid proceſs; and is inſerted at b into the lower part of the ſecond tranſverſe proceſs, near its end.

c d The ſecond, ariſing in like manner at c from the upper part of the tranſverſe proceſs of the ſecond vertebra, and inſerted at d into the lower part of the tranſverſe proceſs of the third vertebra.

e f The third, ariſing in like manner at e from the upper part of the tranſverſe proceſs of the third vertebra, and inſerted at f into the lower part of the tranſverſe proceſs of the fourth vertebra.

g h The fourth, ariſing in like manner at g from the upper part of the tranſverſe proceſs of the fourth vertebra, and inſerted at h into the lower part of the tranſverſe proceſs of the fifth vertebra.

i k The fifth, ariſing in like manner at i from the upper part of the tranſverſe proceſs of the fifth vertebra of the loins, and is inſerted at k into the protuberance that ſtands out from beneath the outer and back part of the tranſverſe proceſs of the loweſt vertebra of the back.

The *ſyſtematic connection* appears in Tab. VIII. *Y O a b c* in the loins, which in Tab. VII. lies behind the common origin of the ſacrolumbalis and longiſſimus dorſi, *d e* in the trunk.

FIGURE XI.

The interſpinalis of the loins, on one ſide.

We have here exhibited only one of them, which is that ariſing from the ſpinal proceſs of the ſecond lumbal vertebra, and inſerted into that of the third.

a a The tendinous beginning that ſprings from the eminence in the ſpine at the bottom of the lower oblique proceſs, and is continued from thence almoſt to the end of the ſpine.

b The tendinous end inſerted into the lower part of the ſide of the ſpine, below the eminence before mentioned.

The like muſcles are placed betwixt the reſt of the ſpines of the lumbal vertebrae; and alſo betwixt the ſpines of the uppermoſt lumbal vertebra, and the laſt of the back.

The *ſyſtematic connection* appears poſteriorly in Tab. VIII. *H L X P S W* along the ſpine, where laterally the multifidus lies near them on each ſide 14. and in Tab. VII. But their edges, or back part, lies behind the broad tendon, by which the ſerratus poſticus inferior, and internal obliquus of the abdomen ariſe, over which tendon again is ſpread the broad tendon by which the latiſſimus dorſi begins, U Tab. VI. in the trunk.

The *interſpinales dorſi* are like thoſe of the loins, only leſs, and found betwixt the lower ſpines of the dorſal vertebrae.

The *ſyſtematic connections* of the interſpinales of the back, are alſo exhibited in Tab. VIII. *C D* along the ſpine, where the multifidus 14. lies at the ſide of them. Theſe alſo have their back parts, or edges, placed behind the broad tendon, by which the ſerratus poſticus inferior, and internal obliquus of the abdomen ariſe; over which again is ſpread the broad tendon, whereby the latiſſimus dorſi begins, U Tab. VI. in the trunk.

FIGURE XII.

The quadratus lumborum, viewed in its fore part.

a a The tendinous beginning which ariſes at a a from the upper and inner part of the criſta, or edge of the os ilium, almoſt from the poſterior half of its length, divided in the middle; and at b it ariſes from the ligament that goes acroſs from the tranſverſe proceſs of the loweſt lumbal vertebra to the os ilium.

c c The broad tendinous end that is inſerted into the inner part of the lower edge of the twelfth rib, not far from its firſt head.

d e The ſmall tendinous end that is inſerted at e into the ſide of the body of the loweſt vertebra of the back, near the laſt rib.

Add here Fig. 13.

The *ſyſtematic connection* appears in Tab. IV. p in the trunk, where the reſt of it is covered by the pſoas magnus t, lies hid behind the diaphragm T S R in the trunk, and *Y* R.

f The ligament that runs a-croſs from the tranſverſe proceſs of the loweſt lumbal vertebra to the os ilium.

FIGURE XIII.

The quadratus lumborum, viewed in its back part.

a Part of its origin from the ligament that goes acroſs from the tranſverſe proceſs of the loweſt lumbal vertebra to the os ilium.

b c d e f g h i Tendinous portions inſerted into the lower part of the ends of the tranſverſe proceſſes; c to the ſecond, e to the third, g to the fourth, i to the fifth of the lumbal vertebrae.

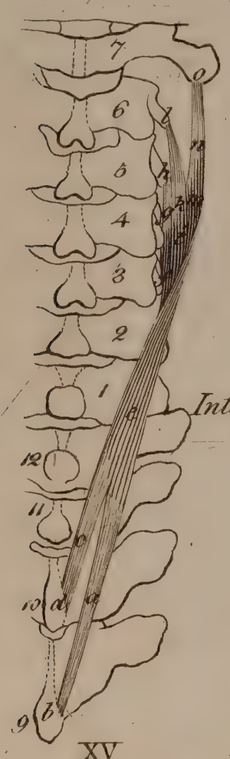
k l m n Heads which ariſe tendinous from the upper part of the ends of the tranſverſe proceſſes; k of the ſecond, l of the third, m of the fourth, n of the fifth of the vertebrae of the loins. The fleſh in which they end is then joined to the back part of the muſcle, as in the uppermoſt of them n, ſo in the reſt before the tranſverſe proceſſes.

Add here Fig. 12.

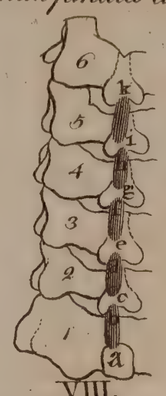
The *ſyſtematic connection* appears in Tab. VIII. *d* in the loins, where in part it lies under the intertranſverſarii of the loins *Y. O. a. b. c.* And what there appears naked is covered by the tendinous beginning of the tranſverſalis of the abdomen, over which again is ſpread the common tendinous origin of the obliquus internus of the abdomen, and ſerratus poſticus inferior, alſo by the common head of the ſacrolumbalis and longiſſimus dorſi, *d e* in the trunk, Tab. VII.

TAB XVI.

I. *Splenius colli.*

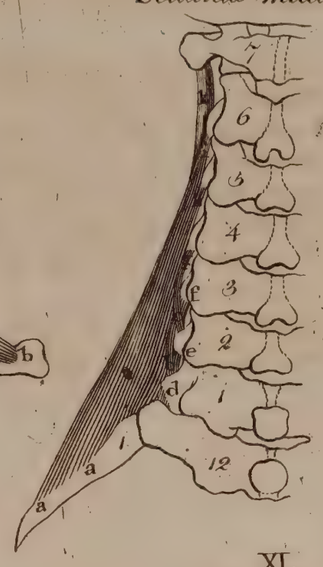


II. *Interspinalis cervicis.*

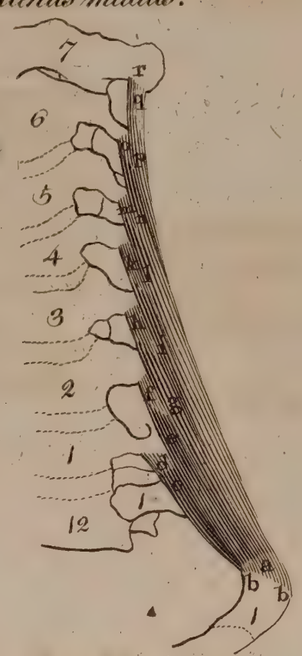


III. *Interspinalis cervicis.*

IV. *Scalenus medius.*



V. *Scalenus medius.*

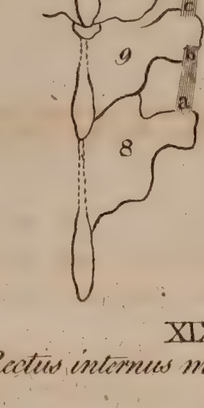


VI. *Longus Colli.*

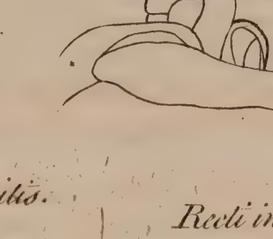
VII. *Longus colli.*

VIII. *Intertransversarii priores colli*

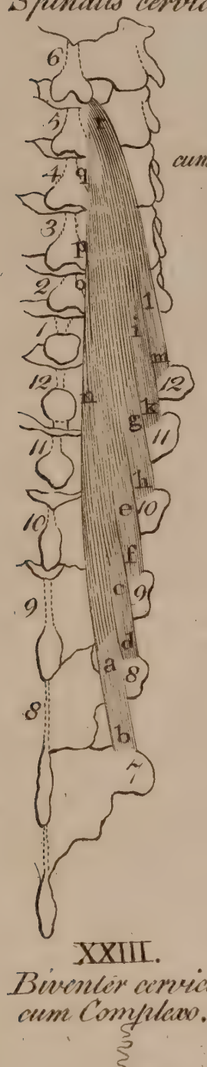
IX. *Intertransversarii posteriores colli.*



XI. *Scalenus prior.*



XV *Spinalis cervicis.*

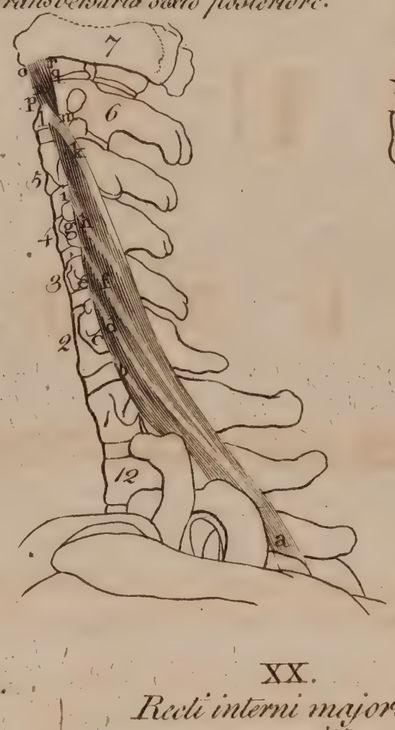


XVI. *Transversalis cervicis cum Intertransversario sacro posteriore.*

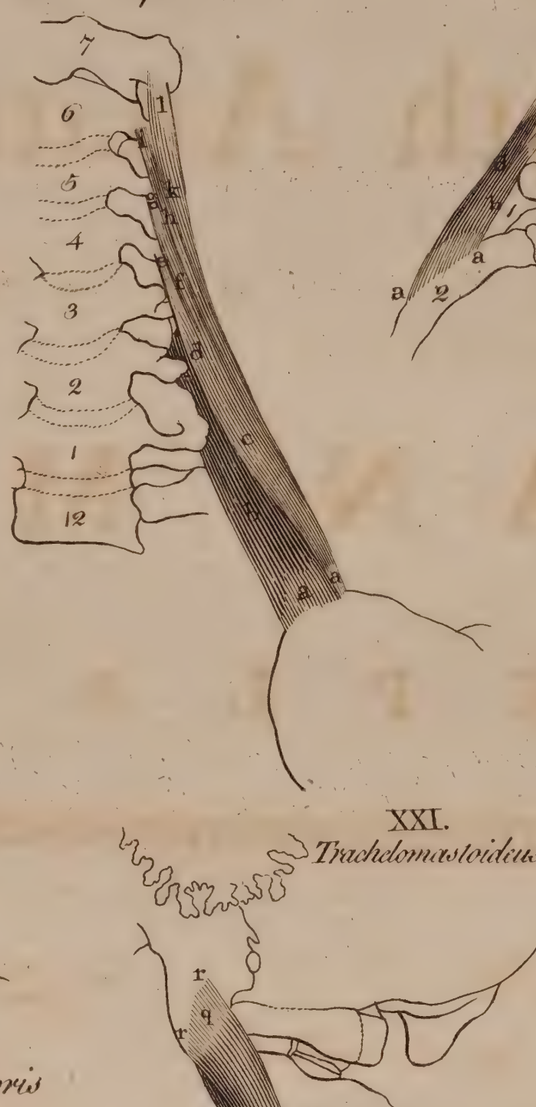
X. *Intertransversarius prior quartus colli.*

XVII *Transversalis cervicis*

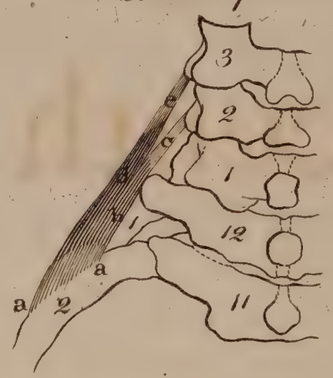
XVIII. *Transversalis cervicis cum Intertransversario sacro posteriore.*



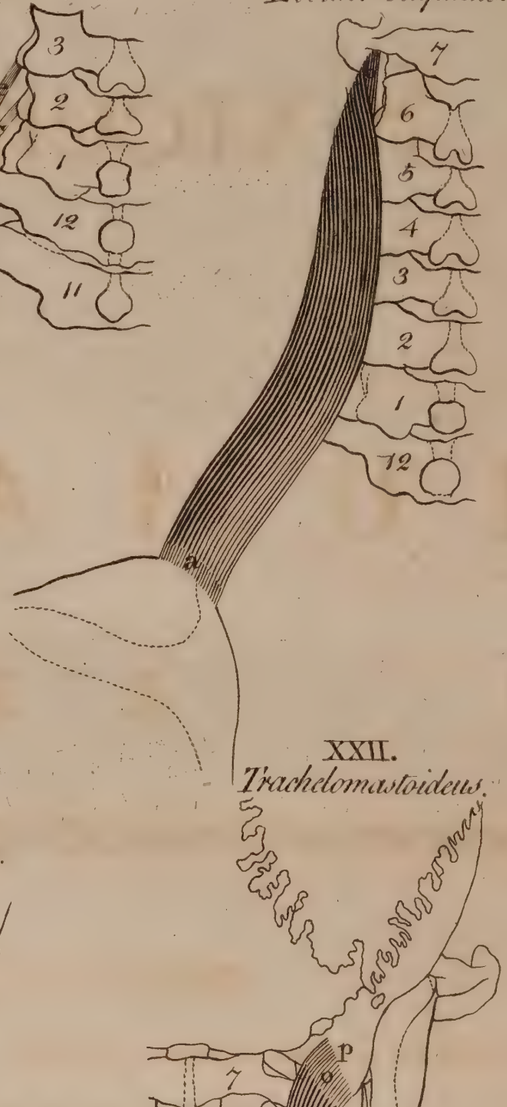
XIII. *Levator scapulae.*



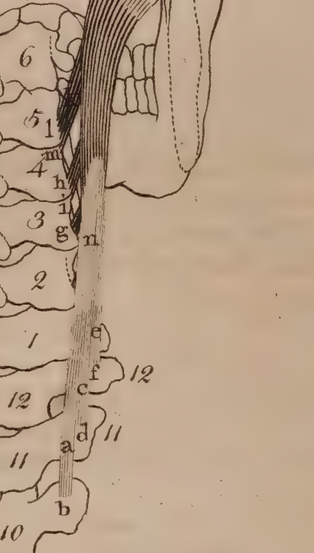
XII. *Scalenus posticus.*



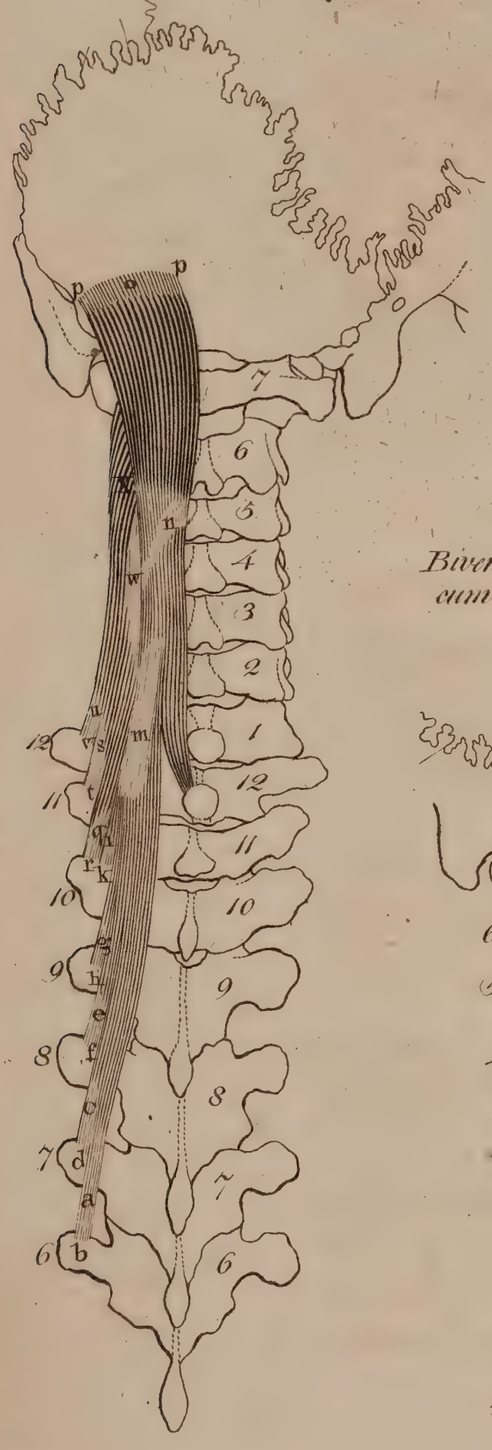
XIV. *Levator scapulae.*



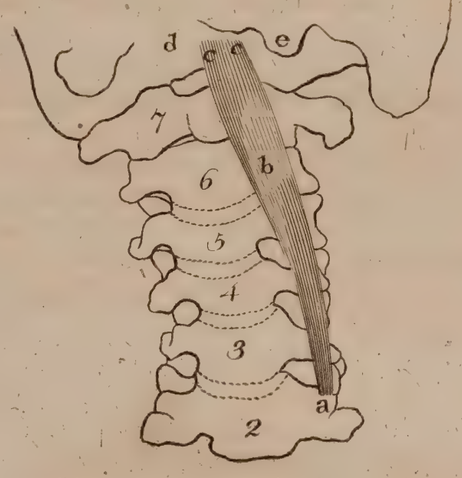
XXII. *Trachelomastoideus.*



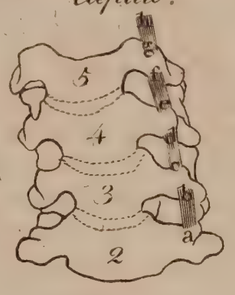
XXIII. *Biventer cervicis cum Complexo.*



XIX. *Rectus internus major capitis.*

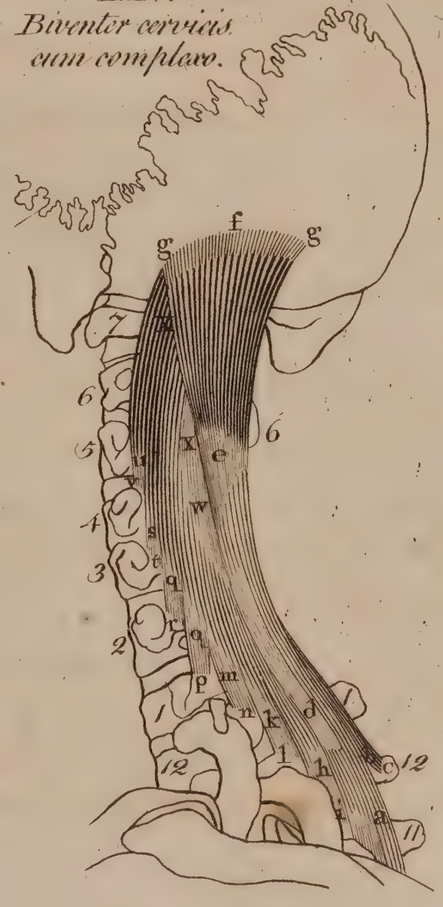


XX. *Recti interni majoris capitis.*

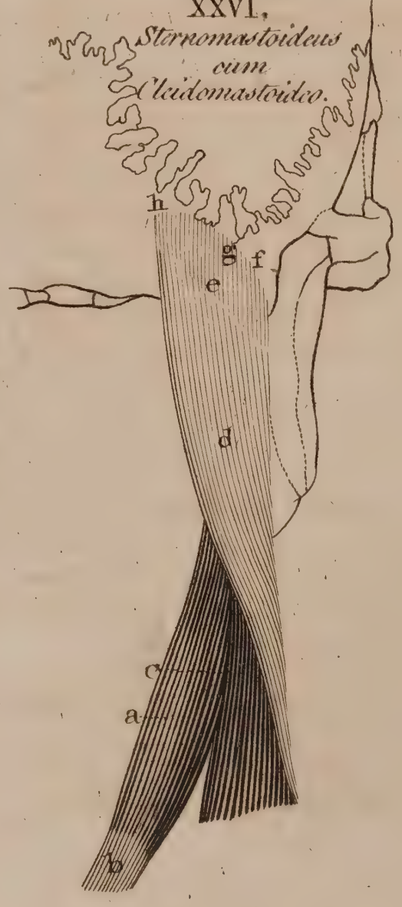


XXV. *Sternomastoideus cum Cleidomastoideo.*

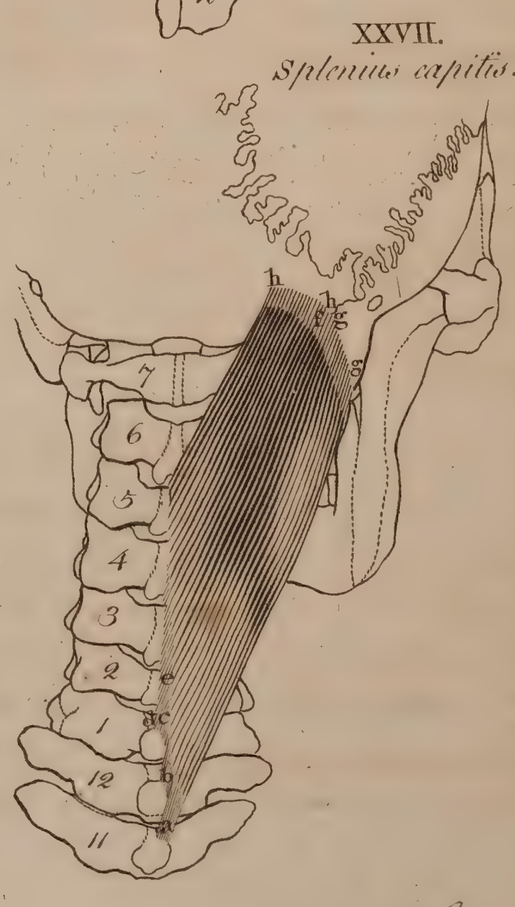
XXIV. *Biventer cervicis cum complexo.*



XXVI. *Sternomastoideus cum Cleidomastoideo.*



XXVII. *Splenius capitis.*



A. Bell Sculp.t

o The ligament that is extended acroſs from the tranſverſe proceſs of the loweſt lumbal vertebra to the os ilium.

The *ſyſtematic connection* appears in Tab. VIII. *ſ* in the loins.

FIGURE XIV.

The pſoas parvus.

a The tendinous beginning by which it adheres at b to the lower margin of the body of the loweſt vertebra of the back, on one ſide; and likewiſe to the ligament c, interpoſed betwixt the body of that dorſal and the uppermoſt lumbal vertebra; and alſo at d from the ſuperior margin of the uppermoſt vertebra of the loins.

f The other tendinous beginning, adhering at e to the lower margin of the uppermoſt lumbal vertebra, and at f to the intervening ligament next following below.

g The tendon which it forms, and which begins about the middle part of the length of the loins. From thence the tendon bends itſelf to the pſoas magnus. i the broad end by which it inſerts itſelf into the margin of the os iſchium, where it forms part of the upper rim of the pelvis before the os ilium, near the ſpine k, that is in the ſaid rim above the great foramen.

l l Along this part the aponeuroſis is cut off, that goes from this tendon and inveſts the pſoas magnus, with the iliacus internus in their fore part, as they paſs before the iſchium.

The *ſyſtematic connection* appears in Tab. IV. r s in the trunk; where at its origin it lies hid behind the diaphragm R; and in its end behind the pſoas magnus t.

THE
Sixteenth Anatomical Table
OF THE
HUMAN MUSCLES
EXPLAINED.

Muſcles of the Neck.

Add here the *cervicalis deſcendens*, Tab. XV. Fig. 3. A. and Fig. 4. z.

FIGURE I.

The ſplenius colli.

a b The tendinous head that ariſes at b from the ſide of the end of the ſpinal proceſs of the ninth vertebra of the back.

c d The tendinous head that ariſes from the ſide of the end of the ſpinal proceſs of the tenth dorſal vertebra, and which is ſhorter than the preceding.

e The fleſhy belly.

f g h The end that is firſt fleſhy at f, then tendinous at g, and belongs at h to the back part of the end of the poſterior tubercle of the tranſverſe proceſs of the fifth vertebra of the neck.

i k l The end that is firſt fleſhy at i, then tendinous at k, and is inſerted at l into the lower part of the end of the tranſverſe proceſs of the ſixth vertebra of the neck.

m n o The end which is firſt fleſhy at m, then tendinous at n, and is inſerted at o into the fore part of the tip that is moſt prominent at the tranſverſe proceſs of the ſeventh vertebra of the neck.

The *ſyſtematic connection* appears in Tab. VI. T U V in the left ſide of the neck and back, where, for the moſt part, it is covered by the upper ſerratus poſticus æ b, and the elevator of the ſcapula Z. Then in the right ſide of the neck and back in the ſame table, where it is alſo covered by the elevator of the ſcapula Z, and by the ſerratus poſticus ſuperior æ b, and in its lower part by the rhomboides major p p q; and that part of it which there appears naked, is in Tab. V. placed under the cucullaris B in the neck and back. But laterally part of it appears naked in Tab. IX. *w* in the neck, where the reſt of it is covered by the cucullaris *z*, and its upper end lies under the ſterno-cleidomaſtoideus *r*,

FIGURE II.

The interſpinales of the neck, a poſterior view.

a b The firſt, which ſpringing from the ſide of the upper part of the ſpine of the loweſt cervical vertebra at a, near the end of its tubercle, goes to the lower and inner part b, of the horn of the ſecond vertebra.

c d The ſecond, which ariſing from the upper part of the horn of the ſecond cervical vertebra, goes to the lower and ſame inner part of the third vertebra.

e f The third, which ſpringing from the upper part of the horn of the third cervical vertebra at e, goes to the lower and ſame inner part of the fourth.

g h The fourth, which ſpringing from the upper part of the horn of the fourth cervical vertebra at g, goes to the lower and ſame inner part of the fifth h.

i k The fifth, which ariſing from the upper part of the horn of the fifth cervical vertebra at i, goes to the lower and ſame inner part of the ſixth vertebra k.

Add here Fig. 3.

The *ſyſtematic connection* appears in Tab. VIII. n o p q r in the left ſide of the neck. Then in the right ſide, where the three upper n o p, in part lie under the ſpinalis colli 2. Then in Tab. VII. p q r s t in the neck, where alſo the three uppermoſt r s t lie partly under the ſpinalis colli o, and the uppermoſt t under the biventer cervicalis l. And what there appears naked in Tab. VI. lies under the ſplenius capitis P in the neck; the uppermoſt is alſo in part uncovered by that muſcle juſt below O; and in Tab. V. it lies under the cucullaris B in the neck and back.

FIGURE III.

The interſpinales of the neck, laterally.

a b The firſt. b its origin from the ſide of the upper part of the ſpine of the loweſt vertebra of the neck, near the end of its tubercle.

c The ſecond. d the third. e the fourth. f the fifth. g, &c. The origin of each from the upper part of the horn of the ſpine.

The inſertion cannot be ſeen, as lying behind the horn of the ſpine.

Add here Fig. 2.

FIGURE IV.

The middle ſcalenus, in its back part.

a a The origin from the firſt rib.

b The head joining it from the upper part of the end of the tranſverſe proceſs of the firſt, or loweſt vertebra of the neck. c the other head from the upper part of the end of the poſterior tubercle of the tranſverſe proceſs of the ſecond vertebra.

d e f g h i k l The extremities inſerted into the tranſverſe proceſſes of the vertebrae of the neck, d of the firſt, e of the ſecond, f of the third, g of the fourth, h of the fifth, i of the ſixth, by a tendinous end; k l of the ſeventh, chiefly tendinous at k, but partly fleſhy at l.

Add here Fig. 5.

The *ſyſtematic connection* appears in Tab. VIII. s, &c. in the neck, where below it is covered by the elevator of the firſt rib *k*; above by the ſixth interſverſarius in the back part of the neck *d*. Then in Tab. VII. E in the neck, where it is alſo covered by the ſcalenus poſticus F G H, the cervicalis deſcendens D, and by the ſupreme tendon of the longiſſimus dorſi, the tranſ-

rsus cervicalis C, and the trachelomaſtoideus z; and what is there uncovered in Tab. VI. lies under the elevator of the ſcapula Z in the neck. But laterally it appears in Tab. IX. *x* in the neck.

FIGURE V.

The middle ſcalenus, in its fore part.

a The tendinous part of its beginning, by which it ariſes from the firſt rib at b b, occupying the whole height of the ſaid rib.

c d The firſt tail, inſerted by a tendinous end into the anterior and lower part of the tranſverſe proceſs of the lower vertebra of the neck.

e f The ſecond tail, inſerted by a tendinous extremity into the lower part of the end of the poſterior tubercle, and at the end of the lunar edge of the tranſverſe proceſs of the ſecond cervical vertebra.

g h The third tail, h the tendinous end belonging to the end of the lunar edge of the third cervical vertebra.

i k The fourth tail, inſerted by the tendinous end k into the extreme lunar edge of the fourth cervical vertebra.

l m The fifth tail, inſerted by the tendinous end m into the extreme lunar edge, and into the bottom of the anterior tubercle of the fifth vertebra of the neck.

n o The ſixth tail, belonging by the tendinous end o, to near the extremity of the proceſs of the ſixth vertebra.

p q r The ſeventh tail, with an extremity inſerted partly fleſhy p, and partly tendinous q, at the fore part the lower edge of the tranſverſe proceſs r of the atlas, about the middle of its length.

Add here Fig. 4.

The *ſyſtematic connection* appears in Tab. IV. *b c*, &c. in the neck; where at its origin it lies behind the clavicle, and has alſo a large part covered by the anterior ſcalenus *P*, &c. And then at its inſertion behind the larger rectus capitis internus *G*. Then in Tab. II. *p p* in the neck; covered by the coracohyoideus *a* near the clavicle, and the ſternomaſtoideus *i l*. And what appears naked in that table, in Tab. I. lies behind the latiſſimus colli *O*, &c. in the neck.

FIGURE VI.

The longus colli.

a The tendinous head by which it ariſes at b from the middle of the lateral part of the body of the tenth dorſal vertebra.

c The tendinous part of the head, by which it ariſes from the body of the twelfth dorſal vertebra. See Fig. 7. c.

d The part from which the lower portion of the muſcle on the outer ſide is formed, going a little obliquely to one ſide, and forming one tail e f, partly fleſhy e, and partly tendinous f, and ending at g in the lower part of the anterior tubercle of the tranſverſe proceſs of the ſecond vertebra of the neck.

h The other principal part of the muſcle, belonging to the bodies of the vertebrae.

i k The firſt of thoſe heads, which join the principal portion of the muſcle from the tranſverſe proceſſes: ſpringing by a tendinous origin i, from the upper and inner part of the anterior tubercle of the tranſverſe proceſs of the 2d cervical vertebra, that is towards the body of the vertebra. k the fleſhy part.

l m The ſecond head, ſpringing by a tendinous origin from the upper and inner part of the anterior tubercle of the 3d cervical vertebra. m the fleſhy part.

n o The third head, ſpringing by a tendinous origin n, from the ſame part of the tubercle of the fourth vertebra. o the fleſhy part.

p q The fourth head, ſpringing by a tendinous origin from the ſame part of the tubercle of the fifth vertebra. y the fleſhy part.

r The tendinous part, inſerted by the extremities into the body of the ſixth vertebra of the neck.

t The tendinous tail, inſerted at u into the lower part of the tubercle of the atlas, which is fixed in the middle of its fore part.

Add here Fig. 7.

The *ſyſtematic connection* appears in Tab. IV. t, &c. in the neck. Then in Tab. III. *D H* in the neck; where it is in part covered by the larger rectus internus capitis *C*; lies partly behind the lower conſtrictor of the pharynx z; and is in part hid behind the ſternothyroideus *q*, &c. But what appears naked in that table, in Tab. II. lies hid behind the ſternomaſtoideus *g l* in the neck.

FIGURE VII.

The heads and tails of the longus colli.

a b The tendinous head by which it ariſes from the middle of the lateral part of the body of the tenth dorſal vertebra. b the place where it is cut off. It is marked a b in Fig. 6.

c d The head, which ſprings by a tendinous origin from the middle of the lateral part of the body of the 11th dorſal vertebra. d the fleſhy part cut off.

e f The head, which ariſes by a tendinous beginning at e from the middle of the lateral part of the body of the 12th dorſal vertebra. f the fleſhy part cut off.

g h The tendinous head, which ariſes at g from about the middle of the lateral part of the body of the 1ſt vertebra of the neck. h the place where it is cut off.

i k The tendinous head, which ariſes at i from about the middle of the lateral part of the body of the 2d cervical vertebra. k the place where it is cut off.

l m The head, which ariſes tendinous at l from the beginning of the firſt rib. m the fleſhy part cut off.

n o The head, which ariſes tendinous at n from the upper and inner part of the anterior tubercle (next the body of the vertebra) belonging to the tranſverſe proceſs of the ſecond cervical vertebra. o the fleſhy part cut off. It is marked i k in Fig. 6.

p q The head, which ariſes tendinous at p from the upper and inner part of the anterior tubercle (that is next the body of the vertebra) belonging to the tranſverſe proceſs of the third vertebra of the neck. q the fleſhy part cut off. It is marked l m in Fig. 6.

r s The head, which ariſes in like manner tendinous at r from the anterior tubercle of the tranſverſe proceſs of the fourth cervical vertebra. s the fleſhy part cut off. It is marked n o in Fig. 6.

t u The head, which ariſes in like manner tendinous at t from the anterior tubercle of the tranſverſe proceſs of the fifth cervical vertebra. u the fleſhy part cut off. It is that marked p q in Fig. 6.

v w The tendinous tail, which is inſerted at v into the body of the third cervical vertebra, in the anterior and lateral part of it not far from its lower margin. w the place where it is cut off.

x y The like tendinous tail, inſerted in like manner at x into the body of the fourth vertebra. y the place where it is cut off.

z *a* The tail, inſerted by a tendinous end z into the body of the fifth vertebra, like the preceding. *a* the fleſhy part that is cut off.

b c The like tail, but much more conſiderable, inſerted by a broader tendinous end about the middle of the height of the fore part of the body of the ſixth vertebra, laterally. *c* the fleſhy part that is cut off.

d e The tail, which is inſerted by the tendinous end *d* into the lower part of the tubercle of the atlas, which is fixed in the middle of the fore part of it. *e* the fleſhy part cut off together with its tendinous part. It is marked t u in Fig. 6.

f g h The tail, which is inſerted at *f* into the lower part of the anterior tubercle of the tranſverſe proceſs of the ſecond vertebra of the neck. It conſiſts of the fleſhy part *g*, and the tendinous part *h*, both of them cut off. It is that marked e f g Fig. 6.

i k The tendinous tail, belonging at *i* to the fore part of the root of the ſpine, that is near the fore part of the tranſverſe proceſs of the firſt cervical vertebra. *k* the place where it is cut off.

Add here Fig. 6.

FIGURE VIII.

The anterior intertranſverſarii of the neck.

a b The firſt, which ariſes at a from the eminence that is in the firſt cervical vertebra, at the anterior root of its tranſverſe proceſs: and is inſerted at b into the lower and fore part of the root of the tubercle, and alſo into the anterior tubercle itſelf of the ſecond tranſverſe proceſs

c d The ſecond, whoſe origin is from the upper and back part of the anterior tubercle and root of the tranſverſe proceſs of the ſecond vertebra, which here lies behind the ſaid tubercle ſo as to be hid from the view: but ſee a in Fig. X. It is inſerted into the lower and fore part of the root and anterior tubercle itſelf of the third vertebra.

e f The third, whoſe origin, like that of the ſecond, is not to be ſeen. f its inſertion into the fourth vertebra, like that of the ſecond into the 3d vertebra.

g h The fourth. Its origin is alſo concealed. f its inſertion into the fourth vertebra, like that of the ſecond into the third vertebra.

i k k The fifth. Its origin is likewiſe concealed. i the tendinous part. k k its inſertion into the lower part of the root of the tranſverſe proceſs of the ſixth vertebra, (and into the edge of its fore part) that ſuſtains the atlas; alſo into the next adjacent part of its body, immediately below the foreſaid edge.

l m n The ſixth, which ariſes at l from the fore part of the anterior root of the tranſverſe proceſs of the ſixth vertebra; and is inſerted at m into the bottom of the anterior margin of the root of the tranſverſe proceſs of the ſeventh vertebra. n the tendinous part of its origin.

Add here Fig. 10.

The *ſyſtematic connection* appears in Tab. IV. *o* the fourth, *p* the third, *q* the ſecond, *r* the firſt in the neck; where in part they lie under the tails of the middle ſcalenus *m. l. i. g*: and firſt under the tails of the longus colli z *a*, belonging to the tranſverſe proceſs of the ſecond cervical vertebra; alſo the ſecond, third, and fourth of the heads of the ſaid longus, which ariſe at x. w v, from the tranſverſe proceſſes of the vertebrae of the neck. Then in Tab. III. firſt *L* in the neck, where it alſo in part lies under the tail *H* of the longus colli, belonging to the tranſverſe proceſs of the ſecond vertebra of the neck; and alſo undor the tail *W* of the anterior ſcalenus: but the other three are hid behind the larger rectus internus capitis *G*.

FIGURE IX.

The poſterior intertranſverſarii of the neck.

a b The firſt, which ariſes tendinous at a from the ſame upper and anterior part of the tranſverſe proceſs of the firſt cervical vertebra. It is inſerted at b into the lower and back part of the poſterior tubercle and adjacent extremity of the lunar margin of the ſecond vertebra.

c d The ſecond, which ariſes tendinous at c from the upper part of the poſterior tubercle of the tranſverſe proceſs of the ſecond cervical vertebra. It is inſerted at d into the lower and back part of the poſterior tubercle and lunar margin of the third vertebra.

e f The third which ariſes tendinous at e from the third cervical vertebra, like the ſecond from the ſecond vertebra; and is inſerted at f into the fourth, as the ſecond is into the third vertebra.

g h The fourth, which ariſes alſo by a tendinous beginning at g from the fourth vertebra, as the ſecond from the ſecond: and is inſerted at h into the fifth vertebra, as the ſecond is into the third vertebra.

i k The fifth, which alſo ariſes tendinous at i from the fifth vertebra, as the ſecond does from the ſecond vertebra: and is inſerted at k into the lower and poſterior part of the tranſverſe proceſs of the ſixth vertebra.

l m The ſixth, which ariſes tendinous at l from the upper part of the end of the tranſverſe proceſs of the ſixth vertebra. It is inſerted at m into the lower part of the extremity of the ſeventh tranſverſe proceſs, near its fore part.

Add here Fig. 16. r. and Fig. 18. q r.

The *ſyſtematic connection* appears in Tab. IX. where they lie behind the anterior intertranſverſarii *o p q r* in the neck, and the tails of the middle ſcaleni *m. l. i. g*. In their back part they appear in Tab. VIII. *d e f g h i* in the neck; where the ſixth *d* lies in part behind the lower obliquus capitis k.

n n The anterior tubercles of theſe vertebrae here cut off, that the intertranſverſarii may appear entire.

FIGURE IX.

The fourth anterior intertranſverſarius colli.

It is here repreſented laterally and apart, that its origin might be ſeen. After the ſame manner with this ariſe the ſecond, third, and fifth.

a The origin from the upper and back part of the anterior tubercle, and root of the tranſverſe proceſs of the fourth vertebra of the neck.

Add here Fig. 8.

FIGURE XI.

The anterior ſcalenus.

a The tendinous beginning, by which it ariſes from the upper edge of the firſt rib, not far from its cartilage.

b c The firſt tail, which is the broadeſt, inſerted by the tendinous end c into the lower part of the anterior tubercle of the tranſverſe proceſs of the ſecond vertebra of the neck: and is alſo continued to the lunar edge of the loweſt or firſt cervical vertebra.

d e The ſecond tail, which is narrower than the firſt; and inſerted by the tendinous end e into the tranſverſe proceſs of the third cervical vertebra, as the firſt was into the ſecond.

f g The third tail, which is ſtill narrower than the ſecond, inſerted by the tendinous end g into the lower lunar edge, and next adjacent part of the anterior tubercle of the tranſverſe proceſs of the fourth cervical vertebra.

The *ſyſtematic connection* appears in Tab. III. *P S*, &c. in the neck; where below it is ſeated behind the clavicle: the inſertion of its end is behind the larger rectus internus capitis *C*, and extremity of the longus colli *H*, belonging to the tranſverſe proceſs of the ſecond vertebra of the neck. Then in Tab. II. *r* in the breaſt; where the reſt of it lies behind the clavicle, the coracohyoideus *a* in the neck; and the ſternocleidomaſtoideus *g i l*. And what appears naked of it in that table, is in Tab. I. ſeated behind the pectoralis *o* in the trunk.

FIGURE XII.

The poſterior ſcalenus.

a b The tendinous beginning, by which it ſprings from the outer part of the upper edge of the ſecond rib, betwixt that part of it that is fixed to the tranſverſe proceſs, and that which forms the curvature forwards.

b c The firſt tail, inſerted by the tendinous end c into the end of the poſterior tubercle of the tranſverſe proceſs of the ſecond vertebra of the neck.

d e The ſecond tail, inſerted by the tendinous end e into the extremity of the poſterior tubercle of the tranſverſe proceſs of the 3d vertebra of the neck.

The *ſyſtematic connection* appears in Tab. VIII. F G H in the neck and trunk; where at its inſertion it lies behind the cervicalis deſcendens D, and the tranſverſus cervicalis C C. But the reſt in Tab. VI. is covered by the elevator ſcapulae Z in the neck.

FIGURE XIII.

The elevator ſcapulae, in its fore part.

a a The tendinous beginning, by which it ſprings from the margin of the ſcapula, juſt above the beginning of its ſpine.

b The inner part of it. c the outer part.

d e The firſt tail, inſerted by the tendinous end e into the extremity of the poſterior horn of the tranſverſe proceſs of the fourth vertebra of the neck.

f g The ſecond tail, inſerted by the tendinous end g into the extremity of the poſterior horn of the tranſverſe proceſs of the fifth vertebra.

h i The third tail, inſerted by the tendinous end i into the lower and forepart of the end of the tranſverſe proceſs of the ſixth vertebra.

k l The fourth tail, which is thicker than the reſt, and inſerted by the tendinous end l into the anterior and lower part of the tranſverſe proceſs of the ſeventh vertebra, betwixt the root and extremity of the ſaid proceſs.

The tails are each longer as they are higher.

Add here Fig. 14.

The *ſyſtematic connection* appears in Tab. II. *q* in the neck; where the reſt lies behind the clavicle, and the coracohyoideus *a* above the clavicle, and the ſternocleidomaſtoideus *l*. In Tab. I. it lies behind the cucullaris *Y* in the neck and trunk.

FIGURE XIV.

The elevator of the ſcapula, in its back part.

a The tendinous beginning, by which it ſprings from the edge of the ſcapula, and which it forms juſt above the firſt beginning of its ſpine.

b The inner part of the fourth tail, at laſt tendinous.

Add here Fig. 13.

The *ſyſtematic connection* appears in Tab. VI. Z in the neck; where its inſertion lies hid behind the ſplenius capitis P. Then in Tab. V. A in the neck; where the reſt is covered by the cucullaris B, and ſternocleidomaſtoideus u: and there concealed alſo behind the ſplenius capitis z. Then laterally in Tab. IX. *y* in the neck; where likewiſe the reſt lies under the cucullaris z, and ſternocleidomaſtoideus *r*.

FIGURE XV.

The ſpinalis colli.

a b The firſt tendinous head, ariſing at b from the poſterior and upper part of the tranſverſe proceſs of the ſeventh vertebra of the back, at the tubercle in which its root ends.

c d The ſecond head, e f the third, g h the fourth, i k the fifth, l m the ſixth; which ariſe in the ſame manner from the eighth vertebra d, from the ninth f, from the tenth h, from the eleventh k, and the twelfth m.

They are each of them ſhorter as they are higher.

n o p q r The ends, which inſert themſelves into the ſide of the lower edge of the end of the ſpine of the ſecond vertebra of the neck n, of the third o, of the fourth p, of the fifth q, and the ſixth r. The portion or end inſerted into the ſixth is thicker. They lie one upon the other, whence it is that only the uppermoſt can be entirely ſeen in the figure.

The *ſyſtematic connection* appears in Tab. VIII. 2, &c. in the back and neck. Then in Tab. VII. o o in the neck and trunk; where it is alſo covered by the biventer cervicalis l i, &c. and by the complexus u, with the longiſſimus dorſi *Y S*. Then in Tab. VI. where it is not diſtinct from the ſemiſpinalis dorſi z in the back: the reſt lies under the ſplenius colli T in the neck; and ſplenius capitis P in the neck; alſo behind the ſerratus poſticus ſuperior æ b in the back; and where it appears not covered by the ſemiſpinalis dorſi, z in the left ſide; in the right ſide it lies under the rhomboides major p p q in the back.

FIGURE XVI.

The tranſverſalis of the neck, in its back part.

a b The firſt tendon, by which it ariſes at b from the upper and back part of the tranſverſe proceſs of the ſeventh vertebra of the back near its extremity.

c d e f The outer part of the muſcle. d the tendon which is marked d Fig. 18. e the tendon that is marked f Fig. 18. f the tendon that is marked k Fig. 18.

g h i k l m n o p The inner part of the muſcle.

g h i The head, ſpringing by a tendinous origin at h from the poſterior part of the oblique aſcending proceſs of the firſt or loweſt vertebra of the neck, at the outer ſide of the oblique deſcending proceſs of the ſecond vertebra. i the fleſh in which it ends.

k l m The head, which ſprings by a tendinous origin k from the back part of the oblique aſcending proceſs of the ſecond cervical vertebra, at the outer ſide of the oblique deſcending proceſs of the third vertebra. m the fleſh in which it ends.

n o p The head, that ſprings by a tendinous origin n from the back part of the oblique aſcending proceſs of the third cervical vertebra o, at the outer ſide of the oblique aſcending proceſs of the fourth vertebra. p the fleſh in which it ends.

q The tendinous end, which being conjoined with the ſixth poſterior intertranſverſarius colli r, is inſerted into the anterior and lower part of the tranſverſe proceſs of the atlas.

Add here Fig. 17. and 18.

The *ſyſtematic connection* appears in Tab. VII. C C in the neck; where it alſo lies under the longiſſimus dorſi *Y*, the cervicalis deſcendens D, and the trachelomaſtoideus z. Then in Tab. VI. Y in the neck; where it alſo lies under the ſerratus poſticus ſuperior æ b, and the elevator of the ſcapula Z, with the longiſſimus dorſi X: above it alſo lies hid behind the ſplenius colli T, and ſplenius capitis P. And what appears naked in that table (*i. e.* VI.) in Tab. V. lies under the cucullaris B in the neck and back.

r The ſixth poſterior intertranſverſarius of the neck.

Add here Fig. 18. p q r. and Fig. 9. l m.

FIGURE XVII.

The firſt five heads of the tranſverſalis colli.

a b The firſt tendinous head, ariſing from the upper and back part of the tranſverſe proceſs of the eighth vertebra of the back, near its end. b the place where it is cut off. It is marked a b in Fig. 16.

c The ſecond tendinous head, ariſing in the ſame manner from the ninth vertebra.

d e The third, ariſing from the tenth vertebra, d the tendinous beginning, afterwards forming the fleſh e.

f g The fourth head, ariſing from the eleventh vertebra by the tendinous beginning f, ending in the fleſh g.

h i The fifth head, ariſing from the twelfth vertebra in like manner by the tendinous beginning h, and then forming the fleſh i.

They are all cut off, like the firſt; and lie under the muſcle in Fig. 16.

Add here Fig. 16. and 18.

FIGURE XVIII.

The tranſverſalis colli, laterally.

a The lower part to be obſerved in Fig. 16.

b c The firſt tendon, inſerted at c into the lower and back part of the poſterior horn of the end of the tranſverſe proceſs of the ſecond cervical vertebra.

d e The ſecond tendon, inſerted at e into the third cervical vertebra, as the firſt is into the ſecond.

f g The third tendon, inſerted at g into the fourth vertebra, like the firſt into the ſecond.

h i The fourth tendon, inſerted at i into the fifth vertebra, like the firſt into the ſecond.

k l The fifth tendon, inſerted at l into the lower and back part of the end of the ſixth tranſverſe proceſs.

Theſe tendons run from the external part thro' the belly of the muſcle, and are lodged therein almoſt to the extremity of the fleſh.

m The end, which conjoins itſelf to the ſixth poſterior intertranſverſarius colli at n, and is therewith inſerted by the tendinous end o, into the lower and fore part of the tranſverſe proceſs of the atlas.

Add here Fig. 16. and 17.

p The beginning of the ſixth poſterior intertranſverſarius colli, from the upper part of the end of the tranſverſe proceſs of the ſixth cervical vertebra.

q r The back part of the ſixth poſterior intertranſverſarius colli, with which is conjoined the end of the tranſverſalis. r the tendinous end.

Add here Fig. 16. r. and Fig. 9. l m.

Muſcles of the Head and Neck.

FIGURE XIX.

The rectus major internus capitis.

a The firſt head, ariſing from the upper and fore part of the anterior tubercle of the tranſverſe proceſs of the ſecond cervical vertebra.

b The tendinous part by which the fleſh is covered.

c c The end, inſerted into the lower edge of the occipital bone that is towards the os petroſum, almoſt at the opening by which the eighth nerve of the head paſſes out, almoſt as far as the multiform bone.

d Part of the occipital bone that is before the great foramen.

e The lunar edge of the occipital bone, that belongs to the opening thro' which paſs out the internal jugular vein, with the eighth nerve of the head.

Add here Fig. 20.

The *ſyſtematic connection* appears in Tab. III. *C* in the neck. Then in Tab. II. *o* in the neck; where in part it lies behind the ſternomaſtoideus *g l*. In Tab. I. the part does not appear that is ſeen in Tab. II. as being covered by the latiſſimus colli *O*.

FIGURE XX.

The heads of the rectus internus capitis major.

a b The firſt head, wholly fleſhy, ariſing from the upper and fore part of the anterior tubercle of the tranſverſe proceſs of the ſecond cervical vertebra: b the place from whence it is cut off. It is marked a Fig. 19.

c d The ſecond head, ariſing by a tendinous beginning c from the third vertebra, as the firſt does from the ſecond. d the fleſhy part cut off, together with its tendinous part.

e f The third head, ariſing by a tendinous beginning from the fourth vertebra, as the firſt does from the ſecond. f the fleſhy part cut off, together with the tendinous part.

g h The fourth head, ariſing by a tendinous beginning g from the fifth vertebra, like as the firſt does from the ſecond. h the fleſhy part cut off.

The ſecond, third, and fourth heads lie under the belly of the muſcle in its poſterior aſcending parts.

Add here Fig. 19.

FIGURE XXI.

The trachelomaſtoideus, laterally.

a b The tendinous beginning of the firſt head, ariſing at b from the tranſverſe proceſs of the tenth dorſal vertebra.

c d The tendinous beginning of the ſecond head, ariſing at d from the tranſverſe proceſs of the eleventh dorſal vertebra.

e f The tendinous beginning of the third head, ariſing at f from the tranſverſe proceſs of the twelfth dorſal vertebra.

g h The tendinous beginning of the fourth head, ariſing at h from the upper and back part of the tranſverſe proceſs of the firſt or loweſt cervical vertebra, near the oblique aſcending proceſs.

i k The tendinous beginning of the fifth head, ariſing at k from the oblique aſcending proceſs of the ſecond vertebra of the neck; from the outer and back part of the root of the ſaid proceſs, whence it is continued almoſt as far as the beginning of the tranſverſe proceſs.

l m The tendinous beginning of the 6th head, ariſing at m from the oblique aſcending proceſs of the third cervical vertebra, as the fifth head does from the ſecond vertebra.

n o The tendinous beginning of the 7th head, ariſing at o from the oblique aſcending proceſs of the fourth cervical vertebra, as the fifth head does from the ſecond vertebra.

The origin of the fifth, ſixth, and ſeventh heads, from the oblique deſcending proceſſes, cannot here be ſeen, but may be obſerved in Fig. 22.

p The tendinous part. See Fig. 22. n.

q The tendinous end, inſerted at r into the poſterior edge of the maſtoide proceſs.

Add here Fig. 22.

FIGURE XXII.

The trachelomaſtoideus, in its back part.

a b The tendinous beginning of the firſt head, ariſing at b from the upper and back part, almoſt of the extremity of the tranſverſe proceſs of the tenth dorſal vertebra.

c d The tendinous beginning of the ſecond head, ariſing at d from the eleventh dorſal vertebra, as the firſt head does from the tenth vertebra.

f The tendinous beginning of the third head, ariſing in like manner at f from the twelfth vertebra of the back.

Near g is the tendinous origin of the fifth head, ariſing from the back part of the outer lateral edge of the oblique deſcending proceſs of the 3d vertebra of the neck: and below that from the oblique aſcending proceſs of the 2d vertebra.

Near h i is the tendinous beginning of the ſixth head, ariſing at h from the back part of the external lateral edge of the oblique deſcending proceſs of the fifth cervical vertebra: and below that from the oblique aſcending proceſs i of the third vertebra.

k l m The tendinous beginning of the ſeventh head, ariſing at l from the back part of the outer lateral edge of the oblique deſcending proceſs of the fifth cervical vertebra: and below that from the oblique aſcending proceſs of the fourth vertebra m.

n The tendinous portion.

o The tendinous end, inſerted at p into the poſterior edge of the maſtoide proceſs.

Add here Fig. 21.

The *ſyſtematic connection* appears in Tab. VII. z, &c. in the neck, where it is covered by a portion of the longiſſimus dorſi *Y*, and tranſverſalis colli C. Then in Tab. VI. W in the neck, where it alſo lies under the ſerratus poſticus ſuperior æ b, the elevator ſcapulae Z, and part of the longiſſimus dorſi X, ſplenius colli T, and ſplenius capitis P; and what there appears naked in Tab. V. lies under the cucullaris B in the neck and back. Anteriorly it appears in Tab. III. $\frac{e}{E}$ in the left ſide of the neck, where it lies behind the middle ſcalenus E, and complexus E′. And what there appears naked is in Tab. II. ſeated behind the ſternomaſtoideus *l* in the neck, and biventer of the lower jaw y.

FIGURE XXIII.

The biventer cervicalis and complexus, poſteriorly.

a b c d e f g h i k l m n o p p The *biventer cervicalis.*

a b The tendinous beginning of the firſt head, ariſing at b from the poſterior and upper part of the tubercle, in which the traſverſe proceſs of the ſixth dorſal vertebra terminates.

c d The tendinous beginning of the ſecond head, ariſing, like the former, from the ſeventh dorſal vertebra.

e f The beginning of the third head, ariſing in like manner at f from the eighth dorſal vertebra.

g h The beginning of the fourth head, ariſing in like manner at h from the ninth vertebra.

i k The beginning of the fifth head, ariſing in like manner at k from the tenth vertebra.

l The portion, or head that joins the biventer cervicalis, ariſing from the ſide of the ſpine of the twelfth dorſal vertebra. It joins to the middle tendon and belly.

m The middle tendon betwixt the bellies.

n The tendinous portion of the ſecond belly.

o The extremity that is outwardly tendinous, and inſerted at p p into the back part of the occipital bone, at the ſide of its middle, a little lower than where the cucullaris begins.

Add here Fig. 24. a b c d e f g g.

The *ſyſtematic connection* appears in Tab. VII. f—n in the neck and trunk, where below it is covered by the longiſſimus dorſi *Y*, and tranſverſus colli. Then in Tab. VI. M N in the neck, and y in the back, where it is covered by the ſplenius capitis P, the ſplenius colli T U V, and ſerratus poſticus ſuperior æ b; and what there appears naked in the lower part of the left ſide at y, the ſame is in the right ſide covered by the rhomboides major p p q. Then in Tab. V. y in the neck, where the reſt of it is covered by the ſplenius capitis z, the cucullaris C, and ſternocleidomaſtoideus x.

q r s t u v w x The *complexus cervicalis.*

q r The tendinous beginning of the firſt head, ariſing at r from the poſterior and upper part of the tranſverſe proceſs of the tenth dorſal vertebra, near its end.

s t The tendinous beginning of the ſecond head, ariſing in like manner at t from the eleventh vertebra of the back.

u v The tendinous beginning of the third head, ariſing in like manner at v from the twelfth, or uppermoſt dorſal vertebra.

w The tendinous portion, which enters at

x The biventer, and is conjoined and inſerted therewith.

Add here Fig. 24. h—x.

The *ſyſtematic connection* of the complexus appears in Tab. VII. u v in the neck and trunk, where, as here, a great part of it lies behind the biventer f—n, and trachelomaſtoideus z A, with the tranſverſus cervicalis, and longiſſimus dorſi *Y*. Thoſe parts of it which appear naked in the ſaid Tab. VII. lie behind the ſplenius capitis P, and ſplenius colli T, Tab. VI. in the neck. Anteriorly it appears in Tab. III. E′ in the left ſide of the neck, where it is covered by the obliquus ſuperior capitis Æ; and what is there uncovered is in Tab. II. ſeated behind the biventer of the lower jaw y in the neck.

FIGURE XXIV.

The biventer cervicalis and complexus, laterally.

a b c d e f g g The *biventer cervicalis.*

a The lower part, to be obſerved in Fig. 23.

b c The portion, or head that joins the biventer, ariſing at c from the ſide of the ſpine of the twelfth dorſal vertebra, near the tip, or end of the ſaid ſpine.

d The middle tendon betwixt the bellies.

e The tendinous portion of the ſecond belly.

f The extremity that is outwardly tendinous, and inſerted at g g into the back part of the occipital bone, at the ſide of its middle, a little lower than where the cucullaris begins.

Add here Fig. 23. a—p.

The *ſyſtematic connection* appears in Tab. IX. *t* in the head and neck, where it is covered by the ſplenius capitis *u*, the ſplenius colli *w*, the cucullaris *C z*, and ſternocleidomaſtoideus *r ſ*.

h i k l m n o p q r s t u v w x x The *complexus.*

h i The tendinous beginning of the firſt head, ariſing at i from the poſterior and upper part of the tranſverſe proceſs of the tenth dorſal vertebra, near its extremity.

k l The tendinous beginning of the ſecond head, ariſing in like manner at l from the eleventh dorſal vertebra.

m n The tendinous beginning of the third head, ariſing in like manner at n from the twelfth, or uppermoſt vertebra of the back.

o p The tendinous beginning of the fourth head, ariſing at p from the poſterior and upper part of the tranſverſe proceſs of the firſt, or lowermoſt vertebra of the neck, near its oblique aſcending proceſs.

q r The tendinous beginning of the fifth head, ariſing at r from the outer and back part of the root of the oblique aſcending proceſs of the ſecond vertebra of the neck, whence it is continued as far as the root of the tranſverſe proceſs.

s t The tendinous beginning of the ſixth head, ariſing in like manner at t from the oblique aſcending proceſs of the third cervical vertebra.

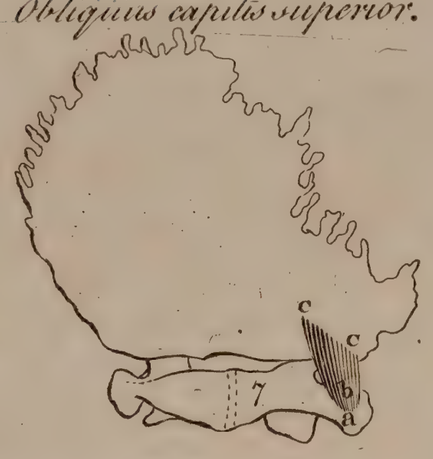
u v The tendinous beginning of the ſeventh head, ariſing at v in the ſame manner from the oblique aſcending proceſs of the fourth cervical vertebra.

TAB. XVII.

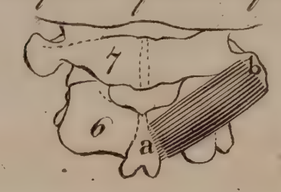
I.
Rectus capitis posticus minor.

II.
Rectus capitis posticus major.

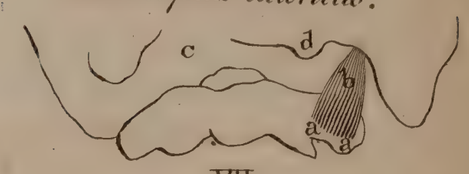
III.
Obliquus capitis superior.



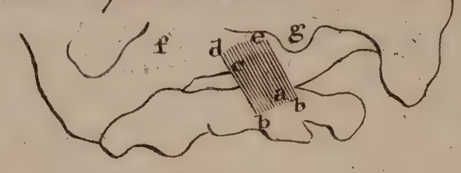
IV.
Obliquus inferior capitis.



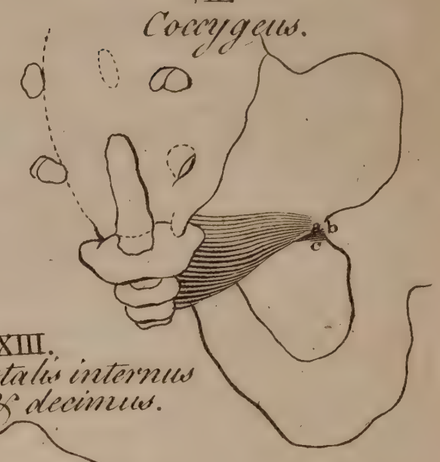
V.
Rectus capitis lateralis.



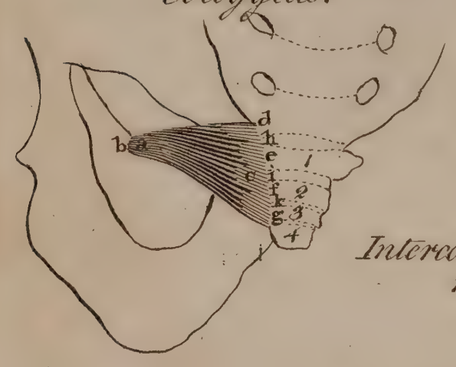
VI.
Rectus capitis internus minor.



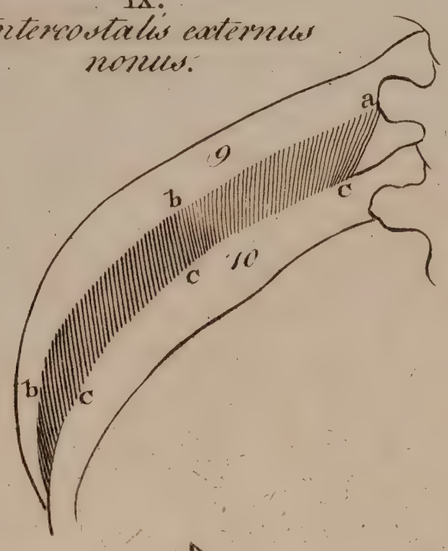
VII.
Coccygeus.



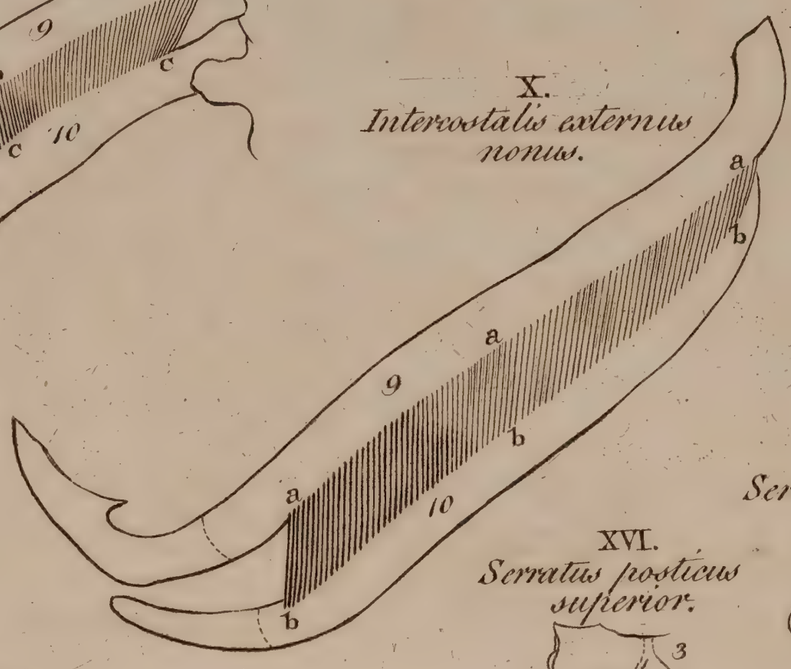
VIII.
Coccygeus.



IX.
Intercostalis externus nonus.

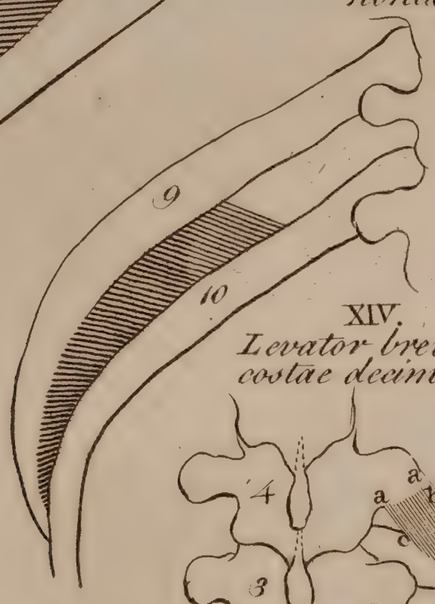


X.
Intercostalis externus nonus.

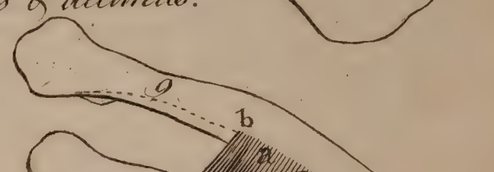


XI.
Intercostalis internus nonus.

XII.
Intercostalis internus nonus.

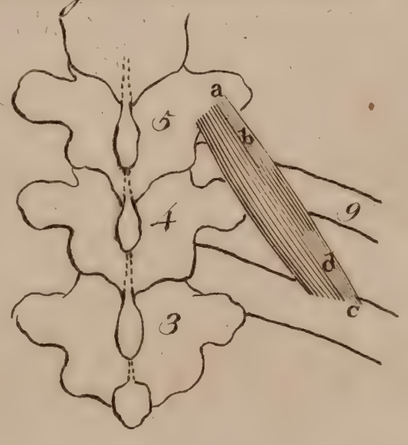


XIII.
Intercostalis internus nonus & decimus.

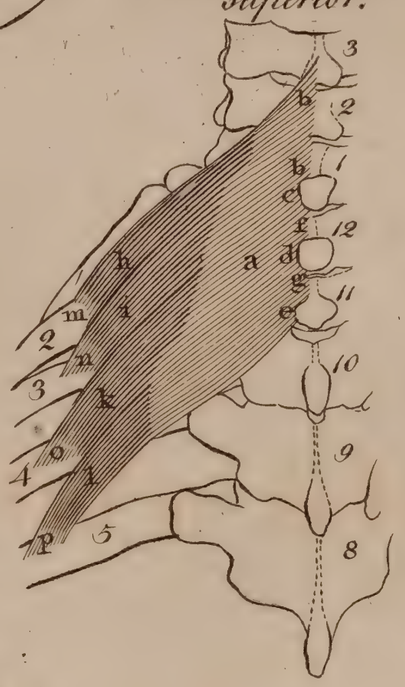


XIV.
Levator brevior costae decimae.

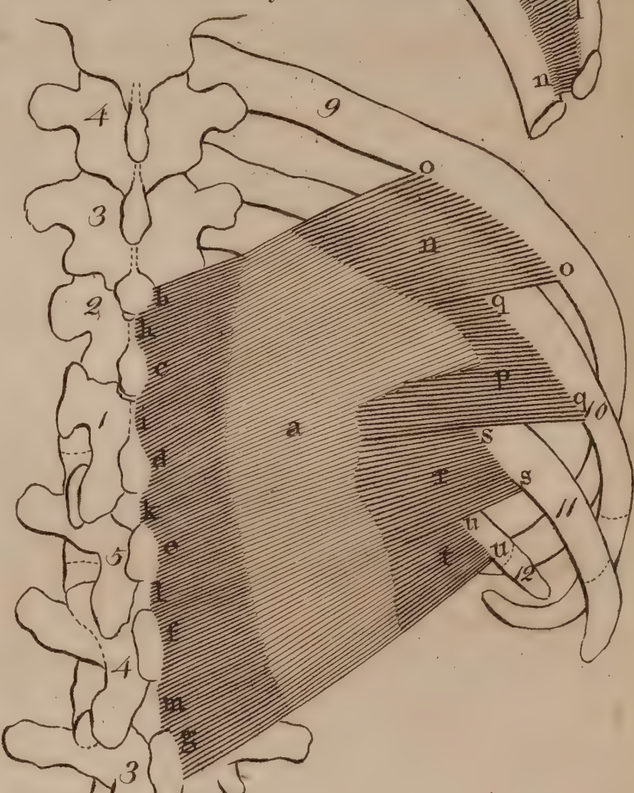
XV.
Levator longior costae decimae.



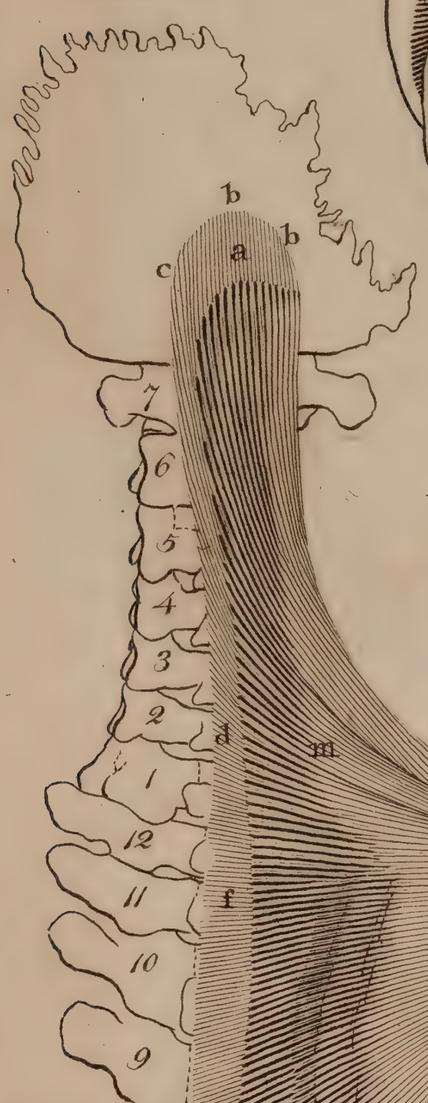
XVI.
Serratus posticus superior.



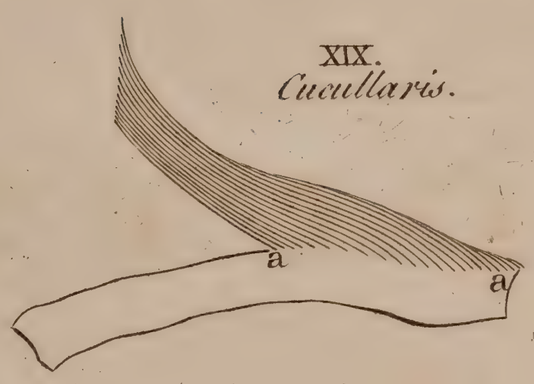
XVII.
Serratus posticus inferior.



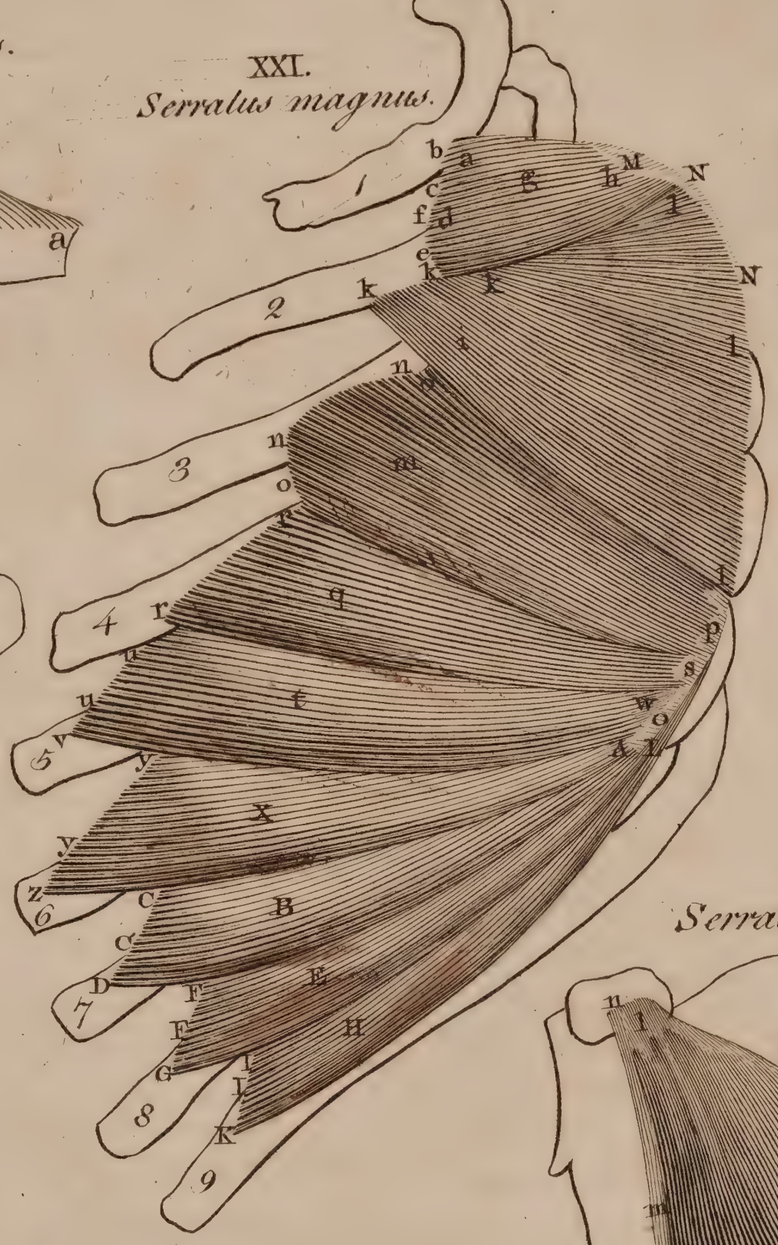
XVIII.
Cucullaris.



XIX.
Cucullaris.

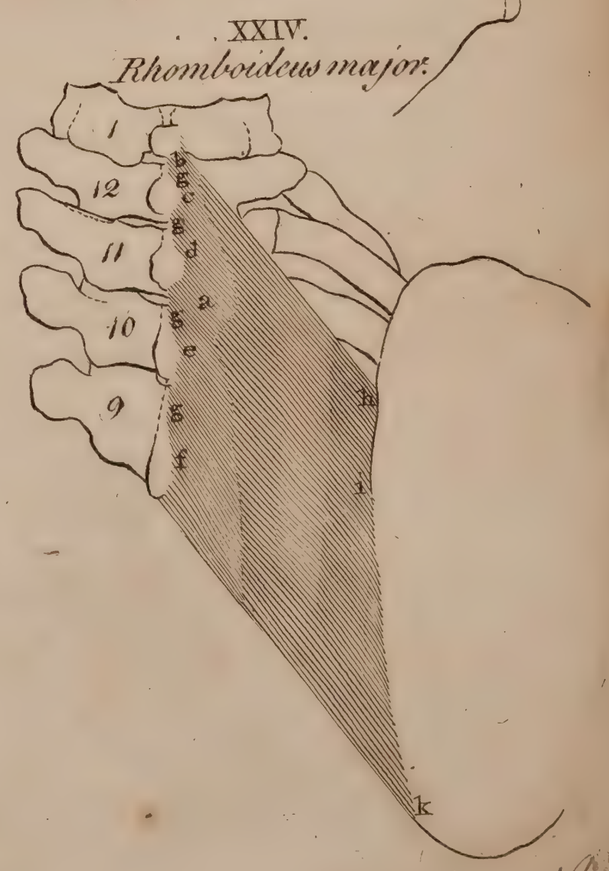


XXI.
Serratus magnus.

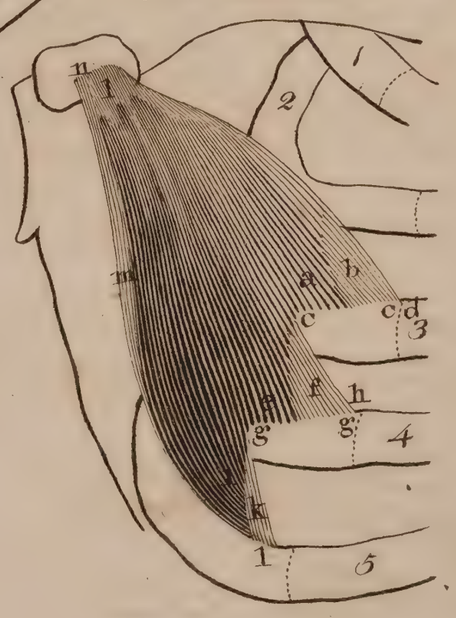


XXIII.
Rhomboideus minor.

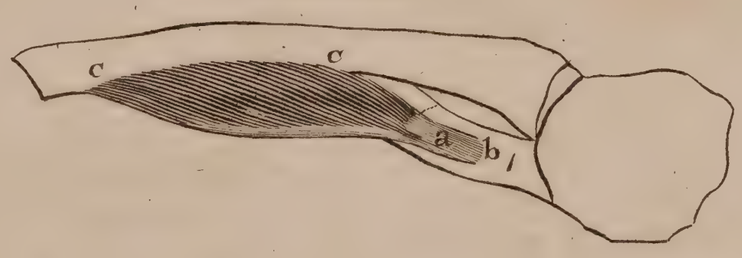
XXIV.
Rhomboideus major.



XXII.
Serratus anticus.



XX.
Subclavius.



The origin of the fifth, ſixth, and ſeventh heads of this muſcle, from the external lateral edge of the oblique deſcending proceſſes of the third, fourth, and fifth cervical vertebrae, cannot be ſeen in this figure.

w The tendinous portion of the belly.

x x The place where the complexus paſſes under the biventer, and afterwards joins and inſerts itſelf therewith juſt below it.

Add here Fig. 23. q—x.

FIGURE XXV.

The ſternocleidomaſtoideus, anteriorly.

a The *ſternomaſtoideus.*

b The tendinous beginning, by which it ariſes at c c from the anterior and upper part of the ſternum, near the head of the clavicle.

d The tendinous end, inſerted at e e into the outer part of the maſtoide proceſs, almoſt through its middle breadth from the top to the bottom.

f The *cleidomaſtoideus.*

g g Its origin, from the upper and fore part of the clavicle, near its head that is joined to the ſternum.

h Thence it joins itſelf with the ſternomaſtoideus, behind which the reſt is ſeated.

Add here Fig. 26.

The *ſyſtematic connection* appears in Tab. II. *g h i k l n* in the neck. Then in Tab. I. *W m* in the neck, where the reſt is covered by the latiſſimus colli *O*, and its extremity is hid behind the outer ear.

FIGURE XXVI.

The ſternocleidomaſtoideus, poſteriorly.

a b The inner and fore part of the ſternomaſtoideus. b the tendinous beginning.

c The inner and fore part of the cleidomaſtoideus.

d The outer and back part of the ſternomaſtoideus and cleidomaſtoideus conjoined together.

e The tendinous end, inſerted in a crooked courſe at f g into the outer part of the maſtoide proceſs, from the top to the bottom, almoſt through the middle of its breadth, being continued backward to part of the temporal bone, and of the occipital bone g h, that are adjacent to the ſaid maſtoide proceſs.

Add here Fig. 25.

The *ſyſtematic connection* appears in Tab. V. u, &c. in the neck. Laterally in Tab. IX. *r* in the neck, where it is partly covered by the latiſſimus colli *m.*

FIGURE XXVII.

The ſplenius capitis.

a The tendinous beginning of the firſt head, ariſing from the ſpinal proceſs of the eleventh vertebra of the back.

b The tendinous beginning of the ſecond head, ariſing from the ſpinal proceſs of the twelfth vertebra of the back.

c The tendinous beginning of the third head, ariſing from the ſpinal proceſs of the firſt vertebra of the neck.

d d The part which proceeds from the ligament of the neck, of which the beginning e is tendinous.

f The tendinous end, inſerted at g g into the poſterior lateral, and outer part of the maſtoide proceſs, through its whole length; and thence it is continued backward to an adjacent part of the temporal and occipital bone h h, almoſt to the part that is in the middle betwixt the root of the maſtoide proceſs and middle of the occiput.

The *ſyſtematic connection* appears in Tab. VI. P in the neck, where it is covered below by the ſerratus poſticus ſuperior æ b. Then in Tab. V. z. in the neck, naked in that part; but the reſt is covered by the cucullaris B, and in the end by the ſternocleidomaſtoideus u. Then laterally in Tab. IX. *u* in the neck, naked in that part; but in the reſt covered by the cucullaris *z*, and the ſternocleidomaſtoideus *r*.

THE

Seventeenth Anatomical Table

OF THE

HUMAN MUSCLES

EXPLAINED.

Muſcles of the Head.

FIGURE I.

The rectus capitis poſticus minor.

a The origin of it from the eminence in the atlas, which is inſtead of a ſpinal proceſs; from which origin it is outwardly tendinous at b.

c c The extremity inſerted into the occipital bone; namely, into the excavation that is betwixt the great foramen and the end of the complexus, near the middle ſpine or ridge that is extended backward from the great foramen.

The *ſyſtematic connection* of it appears in Tab. VIII. a, &c. in the head and neck, where it is partly covered by the *rectus poſticus major* d; and what appears there to be uncovered in Tab. VII. lies behind the complexus and biventer cervicalis, u l in the neck.

FIGURE II.

The rectus capitis poſticus major.

a Its origin from that part of the upper edge of the ſpine of the ſixth vertebra of the neck, that is near the root of the horn, and from the horn itſelf.

b b The end inſerted into the occipital bone, near the middle betwixt that part of the appendix of the lambdoide ſuture, which is formed by the occipital and mammillary bone; and from the lateral part of the great foramen, that is behind the coronoide proceſs; in the middle betwixt the end of the complexus, the upper obliquus, and the rectus poſticus minor.

The *ſyſtematic connection* appears in Tab. VIII. d, &c. in the head and neck, where its end goes under the obliquus ſuperior g. But, in the ſeventh table, it lies behind the complexus and biventer cervicalis, u l in the neck.

FIGURE III.

The obliquus capitis ſuperior.

a The origin from the upper part of the end of the tranſverſe proceſs of the atlas; from which origin it is outwardly tendinous at b.

c c The extremity inſerted into the occipital bone betwixt that part of the appendix of the lambdoide ſuture, which is formed by the os occipitis and mammillare, and the part into which is inſerted the rectus poſticus major.

The *ſyſtematic connection* appears in Tab. VIII. g, &c. in the head and neck. Then in Tab. VII. w x in the neck, where the reſt of it is covered by the complexus u, the biventer cervicalis l, and the trachelomaſtoideus z B; and what appears there uncovered, is in Tab. VI. concealed behind the ſplenius capitis, P in the neck. Anteriorly it appears in Tab. IV. s in the head, and in Tab. III. Æ in the head.

FIGURE IV.

The obliquus capitis inferior.

a Its origin from the upper part of the ſide of the ſpine of the epiſtrophaeus, through the whole length of the ſpine, and a large part of its horn, by a tendinous beginning.

b The extremity, inſerted into the poſterior amplitude of the end of the tranſverſe proceſs of the atlas.

The *ſyſtematic connection* appears in Tab. VIII. k, &c. in the neck. Then in Tab. VII. y in the neck, where the reſt of it is covered by the complexus u, and the trachelomaſtoideus z B; and what there appears uncovered, is in Tab. VI. concealed behind the ſplenius capitis P in the neck.

FIGURE V.

The rectus capitis lateralis.

a a Its origin from the anterior and upper part of the tranſverſe proceſs of the atlas.

b The extremity, which is outwardly tendinous, and inſerted at c into the unequal ſurface of the occipital bone, that is near the maſtoide proceſs, and by the back part of that edge of the occipital bone which forms the poſterior margin of the foramen, through which the internal jugular vein paſſes out.

The *ſyſtematic connection* could not be repreſented.

c Part of the occipital bone that is before the great foramen.

d The lunar edge of the occipital bone that belongs to the foramen, through which the internal jugular vein paſſes out.

FIGURE VI.

The rectus capitis internus minor.

a The tendinous beginning, by which it ariſes at b b from the anterior and upper part of the body of the atlas, near the root of the tranſverſe proceſs, and from the root itſelf.

c The tendinous end, by which it is inſerted at d into the lower and back part of the edge of the occipital bone, which is ſlightly connected with the os petroſum; and particularly into the protuberance which ſtands out from the ſaid edge before the coronoide proceſs; and near the ſame at e, mixes itſelf likewiſe with a ſort of cartilaginous ſubſtance, that fills the ſpace at the bottom of the occipital bone and os petroſum, that is placed before the fiſſure, through which paſſes out the eighth nerve of the brain.

The *ſyſtematic connection* could not be repreſented. It lies partly behind the rectus internus major, Fig. 19. Tab. XVI. and lies partly naked on the outer ſide of the ſaid rectus major internus.

f Part of the occipital bone that is before the great foramen.

g The lunar edge of the occipital bone that belongs to the foramen, through which paſſes out the internal jugular vein.

Muſcles of the Coccyx.

FIGURE VII.

The coccygeus, in its back part.

a The tendinous beginning ariſing at b from the tip of the acute proceſs of the iſchium.

c Part of the tendinous beginning, which proceeds from the inner part of the acute proceſs.

Betwixt a and c the tendinous beginning interweaves itſelf.

Add here Fig. 8.

The *ſyſtematic connection* appears in Tab. VI. d in the lower part of the trunk, where it lies behind a certain portion of the levator ani e. In Tab. V. it lies behind the gluteus magnus *c* in the buttock.

FIGURE VIII.

The coccygeus, in its fore part.

a The tendinous beginning, by which it ſprings at b from the inner part of the tip of the acute proceſs of the iſchium.

c The tendinous end, by which it is inſerted at d into the inner part of the edge of the os ſacrum near its coccyx, and into the firſt bone of the coccyx e, to the ſecond f, to the third g; and is alſo continued to the ligament h, that is placed betwixt the os ſacrum and firſt bone of the coccyx; and the ligament i, that is betwixt the firſt and ſecond bone of the coccyx, and that k, which is betwixt the ſecond and third.

Add here Fig. 7.

Muſcles of the Thorax.

FIGURE IX.

The ninth outer intercoſtal, in its back part.

The example here given is only of the outer intercoſtals, to which add Tab. VIII. H I K L M N O P Q R S in the back.

a b b Its origin from the outer and lower part of the ninth rib, particularly from the part a, where the rib begins to project beyond the tranſverſe proceſs to which it is connected.

c c c The inſertion into the outer and upper part of the tenth rib.

Add here Fig. 10.

The *ſyſtematic connection* appears in Tab. VIII. H I K L M N O P Q R S in the back, where they are in part covered by the ſhort elevators of the ribs *l m n o p q r ſ s t u*; and the ninth, tenth, and eleventh of them are likewiſe in part covered by the longer elevators of the ribs A F G. Then in Tab. VII. N O P Q R R S S T U V W in the trunk, where they are covered by the ſacrolumbalis *n*—*P*, with the cervicalis deſcendens D; and (except the firſt, with the ſecond N, the third O, and the fourth P) they are covered by the ſhorter elevators K L M; but the firſt of them lies hid behind the ſhorter elevator I, and the poſterior ſcalenus F; and in part alſo are hid behind the longiſſimus dorſi *W S Y*, the fifth, ſixth, ſeventh, and eighth. Then in Tab. VI. *w x y z C D D H L* in the left ſide of the back, where what appears naked of them in Tab. VII. is for the moſt part covered by the the ſerratus poſticus ſuperior æ b, by the ſerratus magnus *P*—B, and by the ſerratus poſticus inferior C—L: The right ſide is alſo agreeable to this, except that the fourth part *w*, the fifth *x*, and the ſixth *y*, which are naked in the left ſide, are in this covered by the rhomboides major q; and part of the ſeventh *z* is alſo covered. And what appears naked in the right ſide of Tab. VI. the ſame is covered by the latiſſimus dorſi Tab. V. P in the back.

Anteriorly it appears in Tab. IV. *ſ v t u w x y z* A in the trunk; and in Tab. III. G L M N O P Q R S in the trunk. Then in Tab. II. K K K K K K in the trunk, where they are covered by the ſerratus magnus *Y*—G, and the ſerratus anticus *u* in the breaſt, and the firſt alſo lies hid behind the ſubclavius *ſ* in the breaſt. And the naked part of the firſt in Tab. II. is covered by the pectoralis *o* Tab. I. in the trunk; and of the reſt by the obliquus externus of the abdomen d, &c.

Interiorly the firſt appears in Tab. IV. *s*, the ſecond *v*, the third *t* with the thorax, below the neck, where the ſecond *v* is covered by the ſecond inner intercoſtal C.

FIGURE X.

The ninth outer intercoſtal, laterally.

a a a Its origin from the outer and lower part of the ninth rib.

b b b Its inſertion into the outer and upper part of the tenth rib.

Add here Fig. 9.

FIGURE XI.

The ninth inner intercoſtal, laterally.

We here give only one example of inner intercoſtals, to which

Add Fig. 12. and 13.

FIGURE XII.

The ninth inner intercoſtal, anteriorly.

We here give only one inſtance among the inner intercoſtals, to which add Tab. VIII. T U V W X Y Z a æ b c in the back.

Add here Fig. 11. and 13.

The *ſyſtematic connection* appears in Tab. VIII. T U V W X Y Z a æ b c in the back. But in the right ſide they lie concealed behind the outer intercoſtals H I K L M N O P Q R S in the back, except part of the eleventh internal intercoſtal marked c, which alſo appears in Tab. VII. X. in the trunk, and in Tab. VI. *X* in the back, partly covered by the obliquus internus of the abdomen R S; and what part there remains uncovered, is in Tab. V. covered by the obliquus externus of the abdomen, W in the trunk, and latiſſimus dorſi P in the back.

Anteriorly the ſyſtematic connection appears in Tab. IV. B C D E F G H I K in the left ſide of the trunk. Then in the right ſide B C D, where they are covered by the external intercoſtales *ſ v t*; but more fully in Tab. III. T Y Z a b c d e f g h i k in the trunk, covered by the external ones G L M N O P Q R S. Then in Tab. II. L L, &c. in the trunk, where they are likewiſe covered by the external ones K K, &c. alſo the ſecond, third, and fourth are covered by the ſerratus anticus *u* in the breaſt; alſo the anterior ſeparate portions of the fifth, ſixth, and ſeventh, in part lie under the rectus of the abdomen Z, &c. And what parts appear naked in that laſt cited table, in Tab. I. lie behind the pectoralis *o* in the trunk, and obliquus externus of the abdomen d, &c.

FIGURE XIII.

The ninth and tenth internal intercoſtals, internally.

a a b b b c c d d d e The *ninth internal intercoſtal.*

a a The tendinous beginning, by which it ariſes at b b b from the lower edge of the inner ſide of the ninth rib, and from the upper edge of the groove in which are lodged the intercoſtal veſſels.

c c The tendinous end, by which it inſerts itſelf at d d d into the inner part of the upper edge of the tenth rib, and in the part e obliquely acroſs the inner ſide, or breadth of the rib.

f The portion of the ninth internal intercoſtal muſcle, that deſcends lower than the reſt, and paſſing over the tenth rib, is inſerted into the eleventh.

g Its beginning, that is for a good way tendinous.

h Its tendinous end, inſerted at i i with the tenth intercoſtal, into the inner part of the upper edge of the eleventh rib.

k l l m n n n The *tenth internal intercoſtal.*

k The tendinous beginning, by which it ariſes at l l from the lower part of the inner ſide of the tenth rib, as the ninth does from the ninth rib.

m The tendinous end, by which it inſerts itſelf at n n n into the inner part of the upper edge of the eleventh rib.

Add here Fig. 11. and 12.

The *ſyſtematic connection* of the ſecond appears in Tab. IV. C C below the neck within the thorax. That of the eleventh appears in Tab. IV. L L L in the trunk, where the diaphragm U *H P P* lies thereon, and upon the ninth at U *S S S O*. And in Tab. VIII. æ in the right ſide of the back.

FIGURE XIV.

The elevator brevis of the tenth rib.

This is propoſed as an example for the reſt. See Tab. VIII. *k l m n o p q r ſ s t u* in the back.

a a The origin from the tranſverſe proceſs of the fourth vertebra of the back, from the lower part almoſt of its whole length.

b The tendinous part of its beginning.

c c The extremity, inſerted into the upper edge of the tenth rib, into the acute eminence which ariſes out from thence, where it begins to depart from the bodies of the vertebrae; and beyond that it goes on a little farther than where the rib is jointed with the tranſverſe proceſs, or near the extremity where there is an unequal excavation or groove extended through it; alſo into the outer part of the upper margin a little beyond the ſaid proceſs.

d The tendinous part of the extremity.

The *ſyſtematic connection* appears in Tab. VIII. *k l m n o p q r ſ s t u* in the back, where, except the three firſt, they are covered by the intertranſverſarii of the back f g h i k l m n o; the ninth, tenth, and eleventh, are covered by the longer elevators A F G; the three firſt are covered by the ſpinalis colli 6 7 8; and again the fourth, fifth, and ſixth in the ſame manner; but the ſeventh, eighth, ninth, and tenth are covered by the ſemiſpinalis dorſi t s r q; and all of them by the multifidus. But in Tab. VII. they are likewiſe covered by the longiſſimus dorſi *m S Y*, and ſacrolumbalis *n—P*, with the cervicalis deſcendens D in the trunk; and ſome of the uppermoſt are alſo hid by the tranſverſalis colli C C, and by the complexus cervicalis u; over the firſt and ſecond is ſpread the ſcalenus poſticus F: Thoſe partly naked are the ſecond I, the third K, the fourth L, the fifth M; and upon thoſe parts in Tab. VI. is ſeated the ſerratus poſticus ſuperior æ b in the left ſide of the back, where only a part of the fifth *w* lies naked, which in the right ſide is covered by the rhomboides major q.

Anteriorly the ſyſtematic connection of the firſt elevator brevis appears in Tab. IV. *ſ* in the neck; is in part covered by the middle ſcalenus, the tail *d* belonging to the tranſverſe proceſs of the firſt vertebra of the neck. And in Tab. III *X*. in the neck, it is likewiſe covered by the tail c of the ſaid middle ſcalenus.

FIGURE XV.

The elevator longus of the tenth rib.

This is given as an example of the reſt. Add here Tab. VIII. F G in the back.

a The origin from the lower edge of the back part of the tranſverſe proceſs of the fifth dorſal vertebra.

b The tendinous part of its beginning.

c The end, inſerted into the back part of the upper edge of the tenth rib, near the outer ſide of the elevator brevis, where the rib more inclines itſelf downwards.

d The tendinous part of the extremity.

The *ſyſtematic connection* appears in Tab. VIII. A F G in the back, where they lie partly under the intertranſverſarii of the back i h g. Then again they are covered over by the longiſſimus dorſi with the ſacrolumbalis Tab. VII. *m*, &c. in the trunk.

FIGURE XVI.

The ſerratus poſticus ſuperior.

a The tendinous part, by which it begins and ariſes at b b from the ligament of the neck, from whence it is cut off about the ſecond and third ſpinal proceſs of the neck from the back; from the ſpine of the firſt cervical vertebra c, from the twelfth of the back d, and from the eleventh e; and in the intervals betwixt thoſe ſpines f g they cohere with the next muſcles.

h i k l The four extremities into which this muſcle divides itſelf, and which it inſerts into the ſecond, third, fourth, and fifth ribs, where they firſt begin to bend themſelves forwards, and are inſerted along the upper edge and outer ſide of the ribs.

m The tendinous end of the firſt, inſerted into the ſecond rib.

n The tendinous end of the ſecond, inſerted into the third rib.

o That of the third, inſerted into the fourth rib.

p That of the fourth, inſerted into the fifth rib.

The *ſyſtematic connection* appears in Tab. VI. æ, &c. in the left ſide of the neck and back, where it covers part of the elevator ſcapulae Z, and paſſing with its extremities under the ſcapula, it lies under the ſerratus magnus. Then in the right ſide æ b, where alſo it in part covers the elevator ſcapulae Z; but the reſt is covered by the rhomboides minor m, and the rhomboides major p p q; and what part appears there naked, the ſame is in Tab. V. ſeated behind the cucullaris B in the neck and back.

FIGURE XVII.

The ſerratus poſticus inferior.

a The tendinous part, which ariſes with the latiſſimus dorſi from the ſpine of the third dorſal vertebra b, from the ſpine of the ſecond c, from the ſpine of the firſt d, from the fifth or uppermoſt of the loins e, from the fourth f, from the third g; and in the intervals betwixt the ſpines h i k lm, it coheres with the next muſcles.

n The firſt extremity, which is broader than the reſt, and inſerted at o o into the ninth rib, into the outer part of its lower edge, almoſt where it bends itſelf in the ſide from the back forwards.

p The ſecond end, inſerted into the tenth rib q q. Much narrower than the laſt preceding head above it.

r The third extremity, inſerted into the eleventh rib s s. Still narrower than that next above it.

t The fourth end or extremity, inſerted into the twelfth rib u u, being ſtill narrower than that next above it.

Add here Fig. 3. Tab. XIV.

The *ſyſtematic connection* appears in Tab. VI. C, &c. in the lower part of the trunk, where its origin is covered over by the tendon U, by which the latiſſimus dorſi begins. In Tab. V. it lies wholly concealed behind the latiſſimus dorſi P, &c. in the back.

Muſcles of the Shoulder, compoſed of the Scapula and Clavicle.

FIGURE XVIII.

The cucullaris.

a b b c d e f g The tendinous beginning.

a The broader part of its beginning, ariſing at b b c from the middle and thick part of the occipital bone, and from its lateral edge.

From c to e it coheres with its fellow, and with that

From c to d goes off from the cervical ligament, from whence it is here cut.

From d to e it ariſes from the ſpines of the two lower vertebrae of the neck, and all thoſe of the back, inveſting the back part of thoſe ſpines. In the intervals of the ſpines it coheres with the left cucullaris.

f The tendinous part of its beginning, which is broader towards the bottom of the neck, and upper part of the back.

g The broad tendinous portion of the lower angle.

h The tendinous part of its extremity, which is inſerted into the ſpine of the ſcapula at i, near its baſis.

Afterwards by the continued tendinous end k k, it is inſerted at i l into the outer part of the upper edge of the ſpine of the ſcapula, and of its upper proceſs.

m m The fleſh of the muſcle, whoſe upper fibres deſcend obliquely forwards to the clavicle; the lower aſcend to the ſpine of the ſcapula; the fibres even with the neck and back are tranſverſe, but incline more or leſs to deſcend or aſcend as they are higher or lower.

Add here Fig. 19.

The *ſyſtematic connection* appears in Tab. V. B, &c. in the head, neck, and back. Laterally it appears in Tab. IX. *z*, &c. in the head, neck, and back.

FIGURE XIX.

The anterior part of the cucullaris.

a a Its inſertion into the upper and back part of the clavicle for that half of its length, which is next the proceſſus acromion ſcapulae.

Add here Fig. 18.

The *ſyſtematic connection* of this part appears in Tab. I. *Y* in the neck, where it is in part covered by the latiſſimus colli *O*, &c.

Muſcles of the Clavicle.

FIGURE XX.

The ſubclavius.

a The tendon by which it begins, running through the lower part of its fleſh, and ariſing at b from the outer part of the cartilaginous end of the firſt rib.

c c The end, inſerted into the lower part of the clavicle, all the way from a part not far diſtant from its firſt, as far as that head which lies upon the coracoide proceſs.

The *ſyſtematic connection* appears in Tab. II. *ſ s v v* in the breaſt, where part lies hid behind the coracoide proceſs. In Tab. I. it lies behind the pectoralis • in the trunk, and the deltoides M in the ſhoulder; and betwixt them it lies hid behind the latiſſimus colli *b a* in the trunk. Poſteriorly its connection appears in Tab. VI. *b* near the ſhoulder.

Muſcles of the Scapula.

FIGURE XXI.

The ſerratus magnus.

a The firſt head, which ariſes at b from the outer and lower part of the firſt rib, and from its origin c adheres to the firſt external intercoſtal.

d The ſecond head, which ariſes at e from the whole height or breadth of the ſecond rib, and from its origin f adheres to the firſt outer intercoſtal muſcle.

g The firſt and ſecond head conjoined in one, the thick portion ariſing from which is inſerted tendinous at h, principally into the inner ſide of the very ſhort margin of the ſcapula, betwixt the baſis and the upper rim.

i The third head, ariſing at k k k from the outer part of the lower edge of the ſecond rib. It grows broad in the ſhape of a triangle, and is inſerted into the greater part of the baſis of the ſcapula, on its inner ſide.

m The fourth head, which ariſes at n n from the outer part of the third rib, and from its beginning adheres at o o to the third outer intercoſtal, and is inſerted by its tendinous end p into the baſis of the ſcapula, below the third head.

q The fifth head, which ariſes at r r from the outer part of the fourth rib, and is inſerted by its tendinous end s into the lower angle of the ſcapula, juſt beneath the fourth head.

t The ſixth head, adhering at u u from its beginning to the fourth outer intercoſtal, and ariſing at v from the outer part of the fifth rib. It is inſerted at w into the lower angle of the ſcapula, juſt beneath the fifth head, by a tendinous extremity.

x The ſeventh head, which from its origin y y adheres to the fifth outer intercoſtal, and ariſes at z from the outer part of the ſixth rib. It is inſerted at A in the bottom of the lower angle of the ſcapula, by a tendinous extremity, juſt beneath the fifth head.

B The eighth head, adhering from its beginning C C to the ſixth outer intercoſtal, and ariſing at D from the outer part of the ſeventh rib.

E The ninth head, adhering from its beginning F F to the ſeventh outer intercoſtal, and ariſing at G from the outer part of the eighth rib.

H The tenth head, adhering from its origin I I to the eighth outer intercoſtal, and ariſing at K from the outer part of the ninth rib.

L The common tail or inſertion of the eighth, ninth, and tenth heads, ending tendinous in the lower angle of the ſcapula. With this inſertion the ſeventh head is likewiſe conjoined in ſome bodies.

M N N O The place from whence the ſcapula is removed, that the ſubjacent part of the ſerratus may appear. A very ſmall edge of the ſcapula is left at M, betwixt the baſis and upper edge; and at N N is left part of the baſis, and of the lower angle at O.

The *ſyſtematic connection* appears in Tab. IX. K L M N O P Q in the trunk, where it is covered by the ſerratus anticus G, the pectoralis H, the latiſſimus dorſi *O*, and by the heads U V W of the obliquus externus of the abdomen.

Anteriorly its connection appears in Tab. II. *Y O* A B C D E F G, &c. in the trunk, where it is alſo covered by the ſerratus anticus *u*, &c. and lies hid behind the ſubclavius *ſ*, &c. Then in Tab. I. *x y z* a b in the trunk, where it is covered by the pectoralis *o* in the breaſt; and by the heads of the obliquus externus of the abdomen e f g in the trunk, and by the latiſſimus dorſi *t*.

Poſteriorly its connection appears in Tab. VI. *P S W Y O* A B in the ſide of the thorax, and *f* at the ſhoulder, where the reſt lies under the ſcapula and the ſubſcapularis muſcle that adheres to the inner ſide of the ſaid bone, and under the adjacent muſcles, as the teres major *y* in the ſcapula, the rhomboides major x in the back, the elevator ſcapulae Z in the neck, and the coracohyoideus *g* at the ſhoulder. And what appears naked in that table, is in Tab. V. placed under the latiſſimus dorſi P in the back, and the cucullaris B in the neck and back.

FIGURE XXII.

The ſerratus anticus.

a b The firſt head, by which it ariſes at c c from the outer part of the upper edge of the end of the bony part of the third rib, and at d from its adjacent cartilage. b the thin tendinous part.

e f The ſecond head, by which it ariſes at g g from the outer part of the fourth rib, in an oblique courſe, at its upper part, near its cartilaginous end, and from the adjacent cartilaginous part itſelf at h, whence it inclines downward and backward. f the thin tendinous part.

i k The third head, by which it ariſes at l from the outer part of the upper edge of the fifth rib, not far from its cartilaginous end. k its thin tendinous part.

l m The tendinous end, which begins to appear tendinous before, at m in the margin of the muſcle that lies towards the axilla. It is inſerted at n into the upper and inner part of the coracoide proceſs of the ſcapula, not far from the extreme tip of that proceſs.

The *ſyſtematic connection* appears in Tab. II. *u*, &c. in the breaſt. In Tab. I. it lies under the pectoralis *o* in the trunk, and the deltoides M in the ſhoulder. Laterally it appears in Tab. IX. G in the trunk, where, from the raiſed poſition of the arm, part of it appears uncovered by the pectoralis H.

FIGURE XXIII.

The rhomoideus minor.

a The tendinous beginning, by which it ariſes from the ligament of the neck, near the ſpines of the three lower cervical vertebrae, where it is cut off from the ligament b b.

c c The end inſerted into the ſcapula, at that part of its baſis which is near the riſing ſpine, where the baſis forms an angle with the upper margin.

The *ſyſtematic connection* appears in Tab. VI. m in the back. In Tab. V. it lies under the cucullaris B in the neck and back.

FIGURE XXIV.

The rhomboideus major.

The tendinous origin, by which it ſprings at b from the ſide of the end of the tip of the ſpinal proceſs of the firſt or loweſt vertebra of the neck, the uppermoſt or twelfth of the back c, of the eleventh d, of the tenth e, and of the ninth f. And in the ſpaces betwixt thoſe ſpines it coheres with the adjacent or neareſt muſcles, from whence it is here cut off at g g g g.

h i The part where the muſcle bends itſelf in the direction of the baſis of the ſcapula, but without inſerting itſelf.

i From thence its extremity is inſerted into the baſis of the ſcapula, as far as its lower angle k.

The *ſyſtematic connection* appears in Tab. VI. p, &c. in the back, where it lies partly under the rhomboideus minor m. In Tab. V. it lies under the cucullaris B in the back, and the latiſſimus dorſi P, a ſmall part being naked at L.

Eighteenth Anatomical Table

OF THE

HUMAN MUSCLES

EXPLAINED.

Muſcles of the Humerus.

FIGURE I.

The latiſſimus dorſi, laterally.

a a The broad tendon, by which it begins.

b The fleſhy part.

c d The place where the broad tendon is cut off, where it coheres with the origin of the gluteus magnus.

d e The origin of the broad tendon, from the outer part of the margin of the middle of the ſpine of the ilium.

f g h The heads, which ariſe in the ſide of the body from the outer part of the ribs; f that from the eleventh rib, g that from the tenth, h from the ninth. That from the twelfth rib, lies under the part that ſprings from the os ilium, and therefore does not appear in the figure.

i The place where it bends itſelf to the teres major.

k l The inner portion, of which k denotes the fleſhy part, l the tendon in which it ends.

Add here Fig. 2. and 3.

The *ſyſtematic connection* appears in Tab. IX. *O*, &c. in the trunk, where at its origin it is covered by the cucullaris *z*, and with its end paſſes under the arm.

FIGURE II.

The latiſſimus dorſi, poſteriorly.

a a The broad tendon, by which it begins.

b b Its origin from the ends of the ſpines of the ſix lower vertebrae of the back, from the ſpines of the lumbal vertebrae, and from thoſe of the os ſacrum.

c d Its origin from the oblique proceſſes that are at the ſides of the opening in the os ſacrum, where the canal of the ſpina dorſi terminates.

d e The part that coheres with the beginning of the gluteus magnus, from whence it is cut off.

e f Its origin from the outer edge of the middle portion of the ſpine of the ilium.

g The fleſhy portion.

h The place where it bends itſelf to the teres major.

i k The inner portion; of which i denotes the fleſhy part, k the tendon in which it ends.

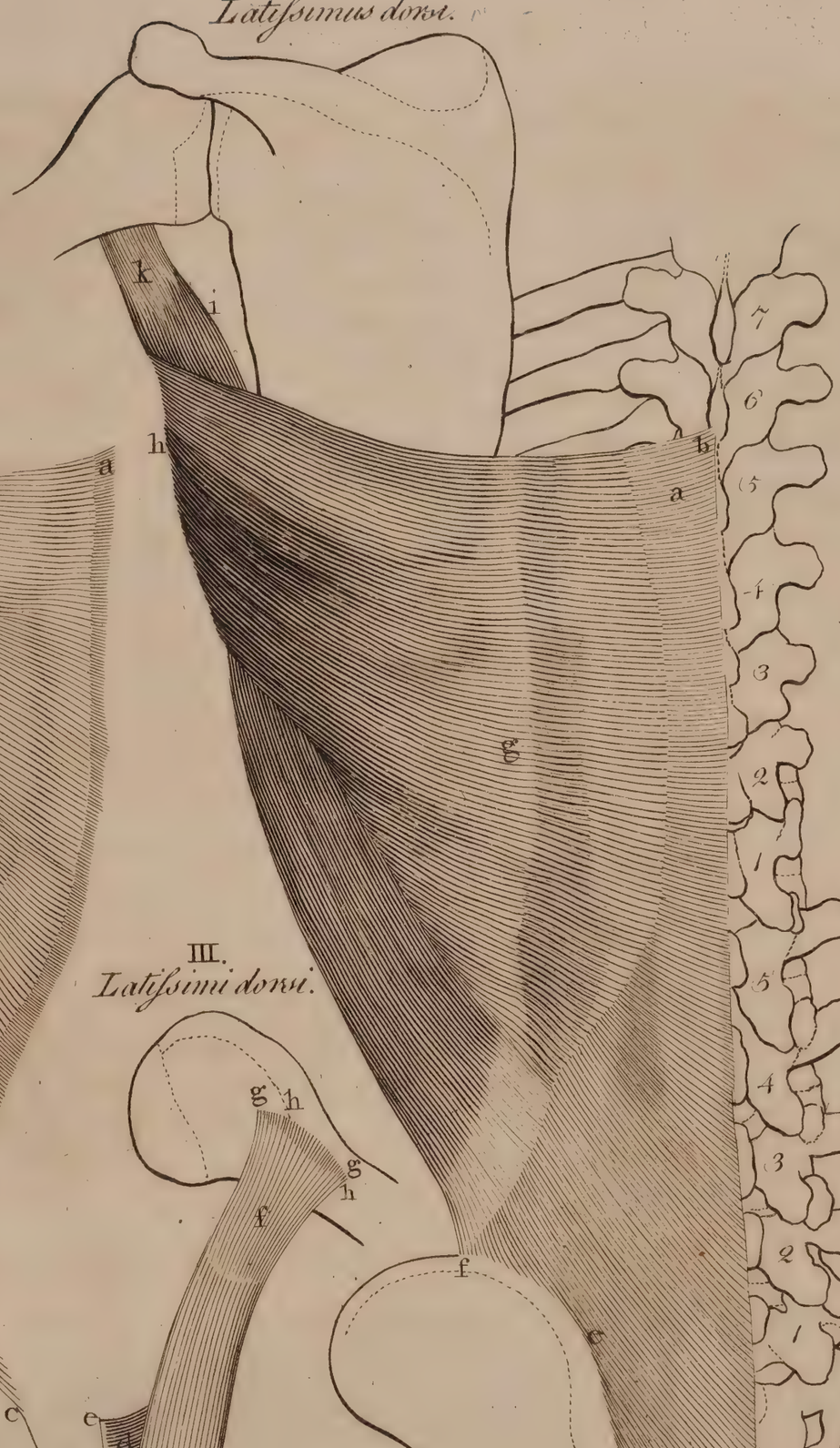
Add here Fig. 1. and 3.

The *ſyſtematic connection* appears in Tab. V. P, &c. in the back, where it is covered at its origin by the cucullaris B F, while its end paſſes under the teres major O.

TAB. XVIII.

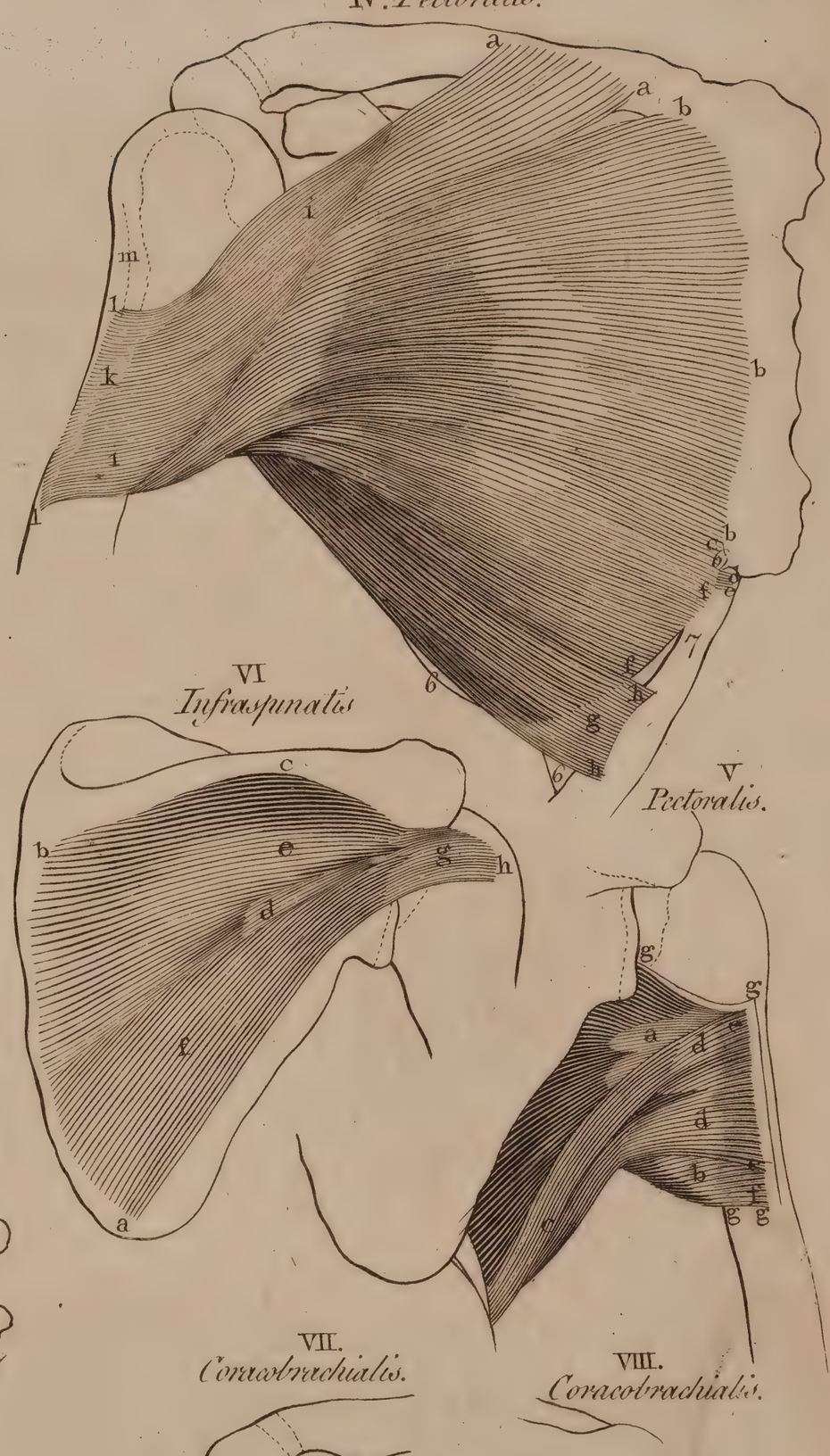
I
Latissimus dorsi

II
Latissimus dorsi.



III.
Latissimi dorsi.

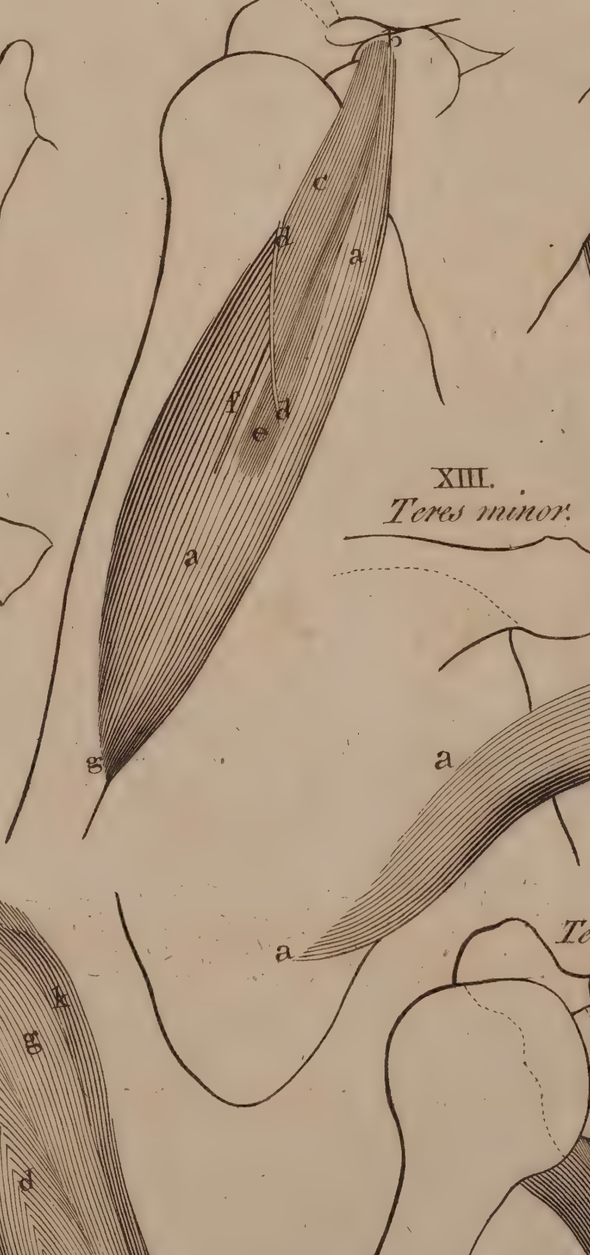
IV. *Pectoralis.*



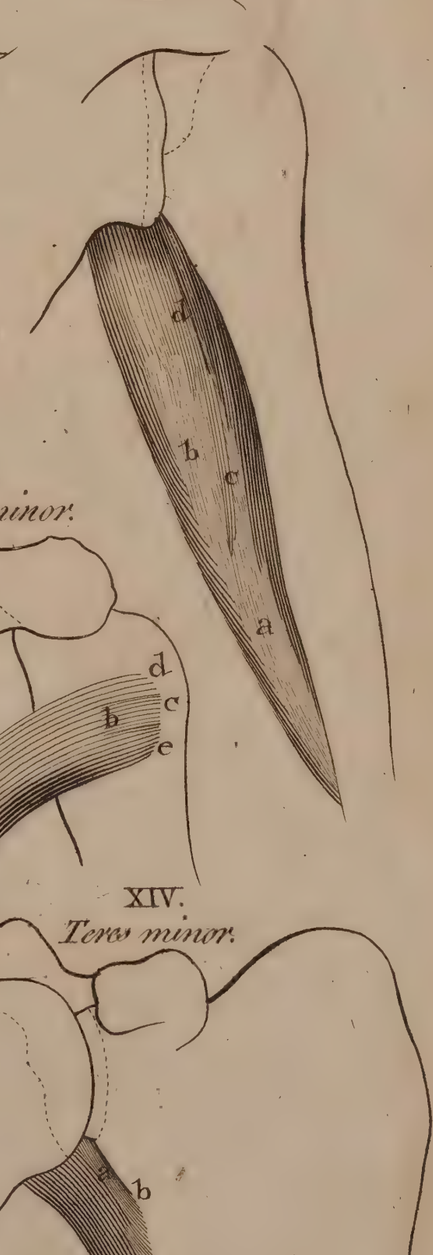
V
Pectoralis.

VI
Infraspinatus

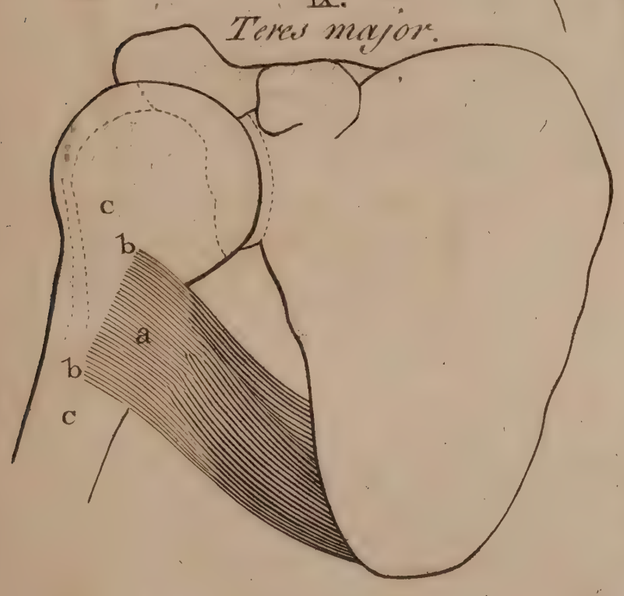
VII.
Coracobrachialis.



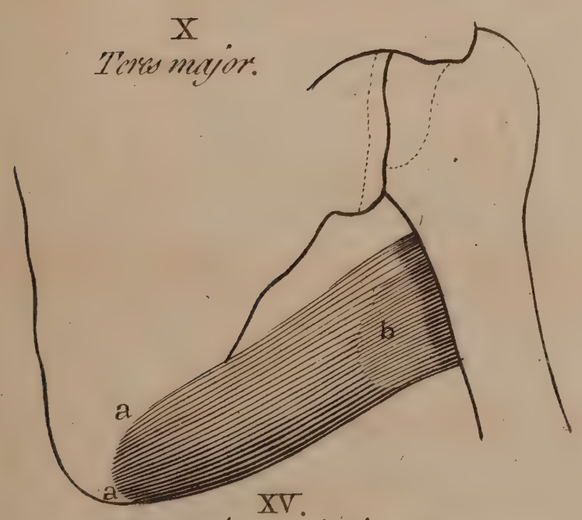
VIII.
Coracobrachialis.



IX.
Teres major.

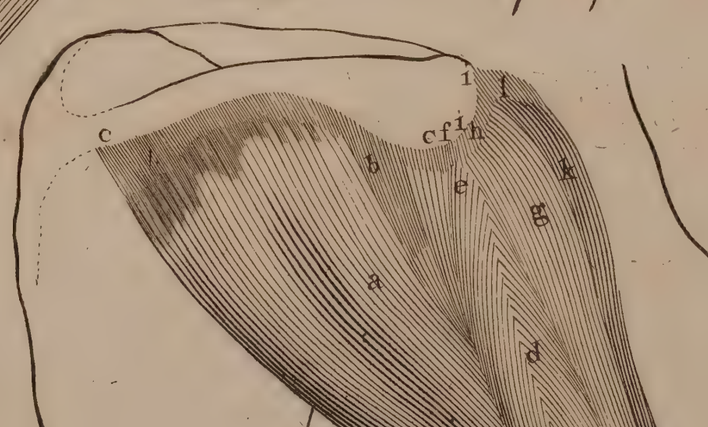


X
Teres major.

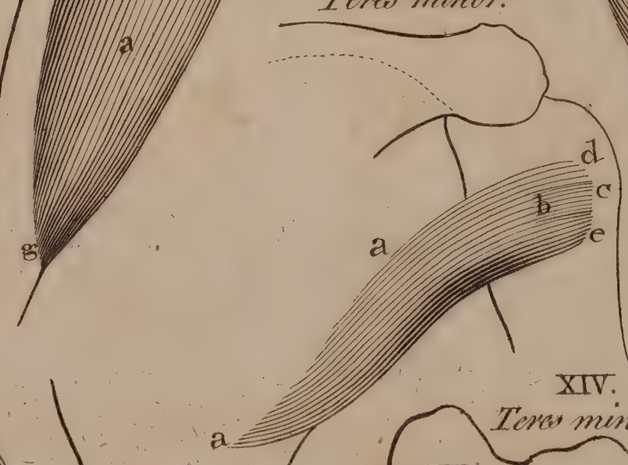


XI.
Deltoides.

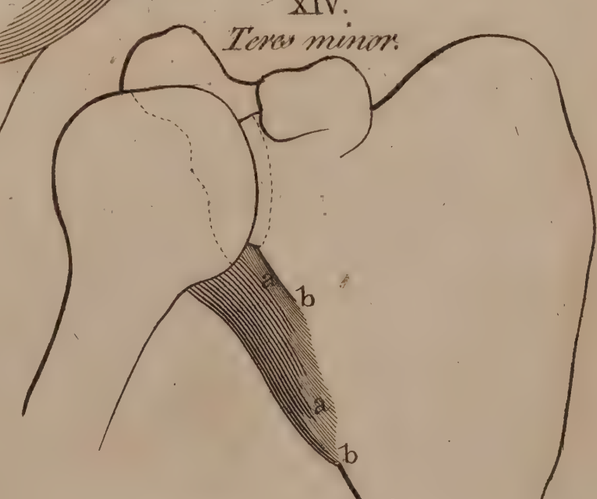
XII.
Deltoidas.



XIII.
Teres minor.

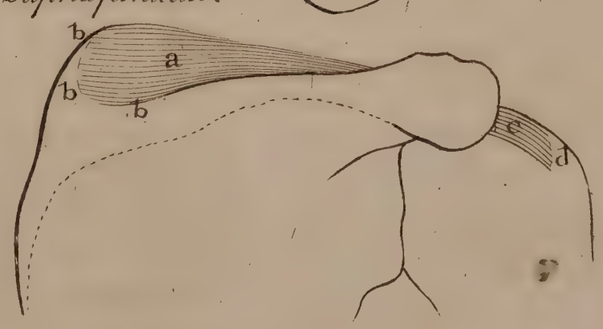


XIV.
Teres minor.

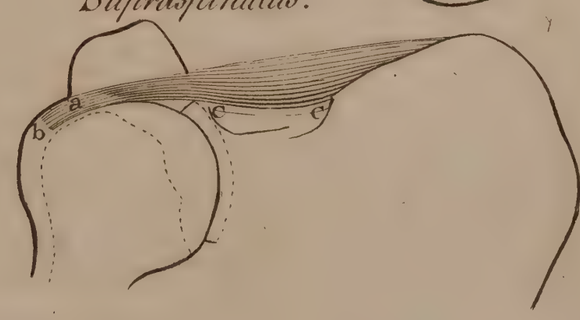


XV.
Subscapularis.

XVI.
Supraspinatus.



XVII.
Supraspinatus.



A. Bell Sculpt.

FIGURE III.

The latiſſimus dorſi, anteriorly.

a b The heads which ariſe from the ribs. a that from the tenth rib. b that from the ninth.

c The anterior fleſhy portion.

d The inner fleſhy portion coming from the back, here cut off at e e.

f The tendon in which it ends, inſerted at g g a little below the leſs unequal protuberance in the upper head of the os humeri, into the fore part of the eminence h h, that terminates the ſinus or channel backward, through which deſcends the tendon of the biceps muſcle of the arm; and then running lower than the ſaid ſinus, where it meets the tendon of the pectoralis, it in part joins and continues itſelf thereto.

Add here Fig. 1. and 2.

The *ſyſtematic connection* appears in Tab. I. *t u w* in the trunk, where in its upper part it lies behind the pectoralis *o*. In Tab. II. part of the end *W* in the humerus, is covered by the coracobrachialis and biceps of the arm u w y z, which in Tab. I. is covered by the pectoralis *o* in the trunk, and the deltoides M, &c. in the humerus.

FIGURE IV.

The pectoralis, anteriorly.

a a Its origin from almoſt all the fore ſide of that part of the clavicle which is incurvated towards the thorax.

b b b Its origin from the anterior part of the os pectoris, all the way from the root of that part which ſuſtains the clavicle, as far as the inſertion of the cartilage that ſuſtains that ſixth rib.

c Its origin from the outer part of the end of the cartilage of the ſixth rib.

d e Its origin from the upper part of the outer ſide of the cartilage of the ſeventh rib, almoſt at its end, where the origination is for ſome way thin and tendinous; and of which the lower part e may be ſaid to belong to the pectoralis, or to the aponeuroſis of the obliquus externus of the abdomen.

f f The part where it coheres with the aponeuroſis of the external obliquus of the abdomen, from whence it is cut off.

g The portion that joins this muſcle from the aponeuroſis of the external obliquus of the abdomen. h h the place where it is cut off from that aponeuroſis.

The portion of this muſcle that ariſes from the fore part of the whole cartilage, and often from the bony end itſelf of the fifth rib, lies here under the muſcle; as alſo do the portions which it receives from the fore parts of the cartilages which the four upper ribs ſend to the os pectoris, and from the adjacent parts of the os pectoris itſelf.

i i The foot-ſteps, or marks impreſſed on this muſcle by the deltoides, under which it in part lies.

k The tendon in which the upper part ends, inſerted at l l into the oblong eminence of the os humeri, that is ſeated in its inner ſide, a little below the large unequal protuberance of the upper head of the humerus, lying along the ſide of the ſinus, and terminating the ſame before, through which the biceps detaches one of its heads. But the tendon ends in that part of the ridge or eminence that looks towards the ſinus.

Add here Fig. 5.

The *ſyſtematic connection* appears in Tab. I. *o* in the trunk, where it is in part covered by the latiſſimus colli *a a a*, and by the deltoides M, &c. in the ſhoulder.

Laterally its connection appears in Tab. IX. H I in the trunk.

FIGURE V.

The end of the pectoralis, in its back part.

a b Portions of its anterior extremity, of which a is tendinous throughout, b is a thin tendinous ſurface. The reſt is covered by the poſterior extremity.

c The lower portion, that coming from the anterior part, bends itſelf round the upper.

d d The poſterior tendinous end, which in its upper part croſſes the firſt end applied to it, and in the end connected with it.

e e f Its inſertion into the os humeri. See Fig. 4. l l.

g g g g A part of the os humeri cut out, in ſuch a manner as to ſhow the end of the muſcle, as it is inſerted.

Add here Fig. 4.

FIGURE VI.

The infraſpinatus.

a b Its origin from the back of the ſcapula, along its baſis; and from the lower part of the ſpine b—C. The reſt continues to ariſe from beneath the ſaid ſpine, as far as the root of its proceſſus acromion, and below that alſo from the ſinus, that is extended along the anterior and lower rim of the ſcapula.

d The tendon that firſt begins to appear externally.

e f The fleſhy portions that join to that tendon. e the upper, that goes off from the ſpine. f the lower portion, that comes from the lower angle.

g The tendinous end, inſerted at h into the upper and back part of the larger unequal protuberance in the upper head of the os humeri.

The *ſyſtematic connection* appears in Tab. VI. *m*, &c. in the ſcapula, where it in part lies under the teres minor *t*, and by its extremity paſſes in ſome meaſure under the proceſſus acromion ſcapulae. Then in Tab. V. I K in the back, where it is partly covered by the latiſſimus dorſi P, and the cucullaris B G, and likewiſe the deltoides *f*, &c. in the ſhoulder.

Laterally its connection appears in Tab. IX. *P* in the trunk, where it is likewiſe covered in part by the latiſſimus dorſi *O*, and the cucullaris *X*, and in part by the deltoides A, &c. in the left arm.

FIGURE VII.

The coracobrachialis, in its fore part.

a a The coracobrachialis muſcle.

b Its common origin together with the ſhorter head of the bicipital muſcle of the arm, from the coracoide proceſs of the ſcapula.

c Part of the ſhorter head of the biceps brachialis, externally tendinous, and conjoined with the coracobrachialis; d d the place where the ſaid ſhort head is cut off.

e The tendinous excurſion, or aponeuroſis that runs along the fleſh of the coracobrachialis, where the ſhort head of the biceps no longer coheres with it.

f The diviſion or ſlit in this muſcle through which a nerve paſſes.

g Its inſertion into the back part of the inner ſide of the os humeri, beneath the middle longitudinal portion of that bone.

Add here Fig. 8.

The *ſyſtematic connection* appears in Tab. III. *f g b*, &c. in the humerus, where at its end it is in ſome meaſure covered by the brachialis internus *m*. Then in Tab. II. u in the arm, where it is in a great meaſure covered by the biceps brachialis w x. Then in Tab. I. R S in the arm, where it is likewiſe covered by the biceps brachialis X, the pectoralis *o* in the trunk, and the deltoides M in the ſhoulder.

FIGURE VIII.

The coracobrachialis, in its back part.

a The tendon, which here ſprings from two originations b c.

d The diviſion or ſlit in its fleſhy part, through which paſſes a nerve.

Add here Fig. 7.

The *ſyſtematic connection* appears in Tab. VII. *n* in the arm; where part lies under the teres major *m*, and the ſubſcapularis *i*, in the ſcapula: part behind the brachialis externus *o p* in the arm: and part is hid by the os humeri. And what there appears naked is in Tab. VI. covered by the extenſor longus C, and the extenſor brevis *z*, in the humerus: a ſmall portion appears naked betwixt them and the teres major *y* in the ſcapula; and which in Tab. V. is covered by the deltoides *f*, &c. in the ſhoulder.

FIGURE IX.

The teres major, in its fore part.

a The tendinous end, inſerted at b b into the oblong eminence c c, that is a little below the leſs unequal protuberance in the upper head of the os humeri.

Add here Fig. 10.

The *ſyſtematic connection* appears in Tab. III. z *a* in the ſcapula, where it is in part covered by the ſubſcapularis v, and in part by the coracobrachialis *g f* in the arm. Then in Tab. II. *S* in the ſcapula, where it is likewiſe covered by the ſubſcapularis *L* in the ſcapula, and by the coracobrachialis u in the arm, and moreover by the extremity of the latiſſimus dorſi *W* in the ſcapula. Then in Tab. I. *ſ ſ* in the trunk, where it is covered by the latiſſimus dorſi *t*, and is hid behind the pectoralis *o*: but in the right arm which hangs down, that part which appears uncovered in the left arm from its elevated poſition, is obſcured or hid from the view.

FIGURE X.

The teres major, in its back part

a a Its origin, from the outer part of the lower angle of the ſcapula, and from the extreme part of its anterior edge.

b The tendinous part of its end.

Add here Fig. 9.

The *ſyſtematic connection* appears in Tab. VII. *k l m* in the ſcapula, where its extremity paſſes under the os humeri. Then in Tab. VI. *y y* near the ſhoulder, where part lies under the infraſpinatus *n ſ*, part under the teres minor *t*, and part behind the extenſor longus C D in the arm: and in the left arm behind the extenſor brevis A. Then in Tab. V. O in the back, where likewiſe part of it lies behind the infraſpinatus I, the teres minor N, and the extenſor longus *p* in the arm; alſo behind the latiſſimus dorſi P, and the deltoides *f* in the ſhoulder.

Laterally its connection appears in Tab. IX. *Y* in the trunk, where part of it lies under the infraſpinatus *P*, part under the latiſſimus dorſi *O*, and part under the deltoides A, &c. in the left arm.

FIGURE XI.

The deltoides, in its fore part.

a The firſt portion of the firſt order, of which this muſcle is compoſed, ariſing tendinous at b b from the fore part of the clavicle c c, where that part is concave: and ſometimes alſo from the tip of the proceſſus acromion ſcapulae.

d The anterior portion of the ſecond order, ariſing tendinous at e from the tip of the proceſſus acromion ſcapulae f, betwixt the origins of the portions a and g, betwixt which it is placed and connected.

g The third portion of the firſt order, ariſing with a tendinous beginning h, from the extremity of the proceſſus acromion ſcapulae, being from its origin conjoined with the tendinous beginnings of the portions, betwixt which it is placed.

k The middle portion of the ſecond order, which ariſes by a tendinous part l, conjoined with the tendinous beginning of the next portion g, from the proceſſus acromion ſcapulae, betwixt the origin of the portion g, and that marked g in Fig. 12. It is inſerted into the middle part m, betwixt the two oblong protuberances that are fixed in the os humeri, juſt above its middle; and it coheres in its extremity with the brachialis internus.

n The tendinous end, formed by the portions a d, and inſerted at o into the anterior of the foreſaid protuberances of the os humeri.

Add here Fig. 12.

The *ſyſtematic connection* appears in Tab. I. M, &c. in the humerus; where at its beginning it is covered by the latiſſimus colli *a a a*, and at its inſertion is covered by the biceps muſcle of the arm W.

FIGURE XII.

The deltoides, in its back part.

a The ſecond and poſterior of the firſt order of portions, of which this muſcle is compoſed, ariſing with a tendinous origin b b, (running for ſome way on its external ſurface) from the lower edge of the ſpine, and from a large part of the proceſſus acromion ſcapulae.

d The poſterior portion of the ſecond order, ariſing with a tendinous beginning e, from the lower edge of the proceſſus acromion ſcapulae f, betwixt the portions a and g, and from its origin conjoined together with the tendinous beginnings of the portions, betwixt which it is placed.

g The fourth portion of the ſecond order, ariſing with a tendinous beginning h, from the proceſſus acromion, bending itſelf into an arch i i, and conjoined with the tendinous bginnings of the portions, betwixt which it is placed.

k The middle portion of the ſecond order, which ariſes by a tendinous beginning l, from the edge of the proceſſus acromion, and is conjoined into one with the tendinous beginning of the next portion g.

m m The tendinous end, formed by the portions a d, and inſerted at n n into the hindermoſt of the oblong protuberances in the os humeri, that are fixed juſt above its middle part: into which alſo the portion g inſerts itſelf.

o o The place where the fleſh is cut off, from its coheſion with the brachialis internus.

Add here Fig. 11.

The *ſyſtematic connection* appears in Tab. V. *f*, &c. in the ſhoulder; where at its beginning it lies under the cucullaris G in the back; at its end under the extenſor brevis *o* in the arm.

Laterally its connection appears in Tab. IX. A, &c. in the left arm; where its end lies behind the brachialis internus S.

FIGURE XIII.

The teres minor, in its back part.

a a Its origin, from the anterior and lower margin of the ſcapula, and from the whole outer part of the ſaid margin, from the lower angle of the ſcapula as far as its neck.

b The tendon, inſerted into the os humeri at c.

d e Fleſhy portions that are inſerted together with the tendon, the one above at d, the other below at e.

They are inſerted into the lower and back part of the larger unequal protuberance in the upper head of the os humeri, and into the extremity of the lower part of its neck.

Add here Fig. 14.

The *ſyſtematic connection* appears in Tab. VI. *t* in the ſcapula; where at its beginning it is partly covered by the infraſpinatus *ſ*, and the teres major *y*. Then in Tab. V. N in the back; where it is alſo covered by the infraſpinatus I, the teres major O, and likewiſe by the deltoides *f* in the ſhoulder.

Laterally its connection appears in Tab. IX. *W* in the trunk; where alſo at its beginning it is partly covered by the infraſpinatus *P*, the teres major *Y*, and after that by the deltoides A, &c. in the left arm.

FIGURE XIV.

The teres minor, in its fore part.

a a The tendinous part of its beginning.

b b Its origin from the anterior and lower margin of the ſcapula.

Add here Fig. 13.

FIGURE XV.

The ſubſcapularis.

a b c d e Five of the firſt order of the faſciculi or portions of which it is compoſed, and which ariſe from eminences in the hollow part of the ſcapula near its baſis: the firſt (a) from a little below the upper angle; the fifth e from the root of the lower angle: the three others b c d ariſe with tendinous portions f f f f f in the middle betwixt the former.

g h i k l Five of the ſecond order of the bundles of which it is compoſed; the four lower of which h i k l are placed betwixt the five of the firſt order; the uppermoſt g above the ſuperior of the former. m m m m m m the originations of them from the inner part of the ſcapula.

The third order of portions lie under the firſt in the intervals betwixt the faſciculi of the ſecond order. Theſe three orders in their origination take up the whole internal ſurface of the ſcapula, from its back part almoſt to its neck; and likewiſe occupy almoſt the whole lower part of the round margin of its anterior and lower rim of the coſta inferior.

n n The common end of the muſcular portions.

o The tendinous end which it forms; inſerted at p p into the leſs unequal protuberance of the upper head of the os humeri, from top to bottom.

q The fleſhy part of the extremity, inſerted beneath the foreſaid tendinous part into the os humeri, below the ſaid leſs protuberance.

r The leſs unequal protuberance in the upper head of the os humeri.

The *ſyſtematic connection* appears in Tab. IV. *W*, &c. in the ſcapula. Then in Tab. III. v v, &c. in the ſcapula; where it is partly covered by the coracobrachialis, with the ſhorter head of the biceps muſcle of the arm *b*, &c. in the arm. Then in Tab. II. *L L P X* in the ſcapula; where it is likewiſe covered by the coracobrachialis with the ſhorter head of the biceps brachialis w in the arm; and it is alſo hid behind the ſerratus anticus *u w*, and the ſubclavius *ſ*, in the breaſt. And what part of it appears naked in Tab. II. is in Tab. I. covered by the deltoides M, &c. in the ſhoulder, and the reſt is hid behind the pectoralis *o* in the trunk.

FIGURE XVI.

The ſupraſpinatus, in its back part.

a The fleſhy part lodged in the cavity, that is above the ſpine of the ſcapula.

b b b Its firſt origin from the back part of the cavity, that is above the ſpine: from thence continuing to ariſe as far as the lunar notch, that is at the root of the coracoide proceſs.

c The tendinous end, inſerted at d into the tip of the larger unequal protuberance in the upper head of the os humeri.

Add here Fig. 17.

The *ſyſtematic connection* appears in Tab VI. *i* in the ſcapula. In Tab. V. it is covered by the cucullaris B H H in the neck and back.

FIGURE XVII.

The ſupraſpinatus, in its fore part.

a The tendon in which it ends, inſerted at b into the tip of the larger unequal protuberance in the upper head of the os humeri.

c c The coracoide proceſs cut off.

Add here Fig. 16.

The *ſyſtematic connection* appears in Tab. II. r s in the arm, where it lies partly under the juncture of the ſcapula, with the clavicle in the top of the ſhoulder: the reſt of it lies behind the coracohyoideus, where that ariſes from the ſcapula, and is concealed behind the ſubclavius *ſ* in the breaſt. And what appears naked of it in that table, is in Tab. I. ſeated under the deltoides M, &c. in the ſhoulder.

THE Nineteenth Anatomical Table OF THE HUMAN MUSCLES EXPLAINED.

Muſcles moving the Cubit or Fore-arm.

FIGURE I.

The brachialis internus.

a b The bifurcated origination of it, from the os humeri, ſurrounding the lower part of the protuberances into which the deltoides is inſerted; below which protuberances, it likewiſe ariſes all the way from the whole extent or breadth of that bone, almoſt as low as the condyles, and along its fore part.

c c c The origin of the poſterior horn from the os humeri.

d The lower part of this muſcle, which lies near the ſupinator longus.

e The tendinous ſurface of its extremity.

f Its inſertion into the inner part of the upper head of the ulna.

Add here Fig. 2.

The *ſyſtematic connection* appears in Tab. III. *k*, &c. in the arm, where it lies under the portion that joins the long flexor of the thumb, *W* in the cubit.

TAB. XIX.

I.
Brachialis internus.

III.
Biceps brachii.

V.
Triceps brachii.

IX.
Radialis internus.

X.
Ulnaris internus.

XIX.
Pronator teres.

XVIII.
Supinator brevis.

XXI.
Pronator quadratus.

IV.
Bicipitis brachii.

XVI.
Supinator longus.

XII.
Radialis externus brevior.

XVII.
Supinator brevis.

VI.
Triceps brachii.

II.
Brachialis internus.

VII.
Tricipitis brachii.

XIV.
Radialis externus longior.

XI.
Ulnaris internus.
Radialis externus brevior.

XIII.
Radialis externus longior.

XV.
Ulnaris externus

VIII.
Anconaeus.

XX.
Pronator teres.

XXII.
Pronator quadratus.

A. Bell Sculp.t

Then in Tab. II. *b—k* in the arm, where the reſt lies under the biceps brachialis *a b c*, and under the ſublimis D in the cubit. Then in Tab. I. *L L L* in the arm; where alſo it lies under the biceps brachialis Y Z *C*, the pronator teres *W*, and the ſupinator longus *P*.

FIGURE II.

The brachialis internus, in its outer part.

a The firſt horn of its beginning. b b its origination from the bone of the humerus.

c c Its inferior and hollow part; on which lies the ſupinator longus.

Add here Fig. 1.

The *ſyſtematic connection* appears in Tab. VII. z A n the arm; where it in part lies under the longer radialis externus C C. Then in Tab. VI. P in the arm; where it is likewiſe covered by the longer radialis externus R, and alſo by the triceps brachialis z F. Then in Tab. V. *y* in the humerus, in like manner covered by the triceps brachialis *o r*, and by the longer radialis externus B in the fore arm, alſo by the ſupinator longus z.

Laterally it appears in Tab. IX. S in the left arm, and *f* in the right arm.

FIGURE III.

The biceps brachialis.

a b c The ſhorter head. a the origination of that head outwardly tendinous, ſpringing at b from the upper part of the end of the coracoide proceſs of the ſcapula. c its fleſhy belly.

d e f g The longer head. d e f the tendon by which it begins; ariſing at d from the ſame outer and upper edge of the ſinus in the ſcapula, into which the head of the os humeri is articulated; where alſo the tendon is continuous with the ligament that enlarges the rim of the ſaid ſinus ſcapulae. From thence it runs down over the head of the os humeri d—e; and then thro' the groove or channel that is betwixt the two unequal protuberances at the head of that bone e—f, to form the fleſhy belly g.

h The common belly of this muſcle.

i The tendon by which it is inſerted into the radius.

k The aponeuroſis, (which it ſends to the tendinous faſcia or covering of the cubit) cut off at l l.

Add here Fig. 4.

The *ſyſtematic connection* of it appears in Tab. II. w—*c* in the arm. Then in Tab. I. W—*C* in the arm; where at its beginning it lies under the pectoralis *o* in the breaſt, and the deltoides M, &c. in the arm; at its end, under the pronator teres of the radius, *W* in the right arm.

In its back part it appears in Tab. VI. O in the arm. Laterally in Tab. IX. P Q R in the left arm, and *g h i* in the right arm.

FIGURE IV.

The end of the tendon of the biceps, on the external part of the radius.

Becauſe the hand is here in a prone poſture, the end of the tendon which is ſmooth, appears bent forwards to the anterior part of the tubercle, that ſtands out from the radius below its neck.

a a Its inſertion into the back part of the ſaid tubercle, thro' its whole length.

Add here Fig. 3.

The *ſyſtematic connection* of this part does not appear; but it follows after the ſupinator brevis *D* in the arm of Tab. VI.

FIGURE V.

The triceps brachialis, in its inner part.

a b The head which is called *extenſor-longus*. b the tendinous beginning.

c d The head called *brachialis externus*. d the tendinous beginning of its poſterior margin, which ariſes at e e from the poſterior edge of the os humeri, and then from the tendon f f.

f f g g h A certain tendon that ſtands out from the os humeri, along which it ariſes at g g, and is inſerted at h into the poſterior condyle of that bone.

i The tendon, which ariſing from the ſurface of the brachialis externus, belongs to the poſterior condyle of the humerus k, and is conjoined with the tendon f f.

l m The caput or *extenſor brevis* as it is called; m the tendinous part of its beginning.

n The ſpace betwixt that head and the os humeri, through which a conſiderable nerve, artery, and vein, paſs along to the cubit.

Add here Fig. 6. and 7.

The *ſyſtematic connection* appears in Tab. II. *d e f g* in the arm; where it in part lies hid behind the coracobrachialis u, and the biceps brachialis x z *a*; and the longus *e* in its upper part goes under the teres major *S* in the ſcapula; the brevis *d* is covered by the brachialis internus *b* in the arm. Then in Tab. I. T V *D H* in the arm; where in the ſame manner it lies concealed behind the coracobrachialis R S, and the biceps brachialis W X Y; and the longus T goes under the teres major *ſ* in the trunk; and the brevis V is covered by the brachialis internus *L*. But ſeparately, the part called brachialis externus Tab. III. *h i* in the arm, is there partly covered by the coracobrachialis *f*. Then in Tab. II. *f g* in the arm; and in Tab. I. *D H* in the arm; as we ſaid before.

FIGURE VI.

The triceps brachialis, in its outer part.

a b c c c d The *caput brevis* as it is called. b the tendinous part of it, ariſing at c c c from the outer part of the os humeri, at the root which ſuſtains the upper head of that bone, thence deſcending in its origination, at firſt a little obliquely as far as the back part of the end of the deltoides, then according to the length of the bone by the back part of the anterior horn of the brachialis internus, and then behind the ſaid inner brachialis itſelf, to the anterior margin of the os humeri; and having left a ſpace (n Fig. 5.) at about the middle of the arm, it is then again continued on for ſome way in the direction of the ſaid margin. d the ſinuoſity impreſſed on this muſcle by the deltoides.

e f g h The *caput longus* of this muſcle. f the tendinous beginning, by which it ſprings from the bottom of the neck of the ſcapula at g, and from the extreme part of the margin that is beneath its neck. h a ſinuoſity impreſſed by the deltoides.

i The head called *brachialis externus*.

k The common tendon of theſe three heads. In the outer part of which the caput brevis terminates here very ſuddenly and ſooner than uſual, cloſe by the caput longus; and the fleſhy fibres of the ſame join themſelves in a continued ſtraight courſe all the way to thoſe of the longus, and in their lower part externally to the tendinous portion l, that is formed by the longus.

m The tendinous portion, that is formed by the brachialis externus, and joins the common tendon.

But the manner in which the longus forms a broad tendon internally, towards the brevis, and how the fibres of the brevis join the ſame, as the fibres of the longus join the brevis outwardly, could not be expreſſed in the figure.

n The tendinous portion, which ariſing from the ſurface of the brachialis externus, belongs to the larger and interior condyle of the humerus.

p q The common tendon, inſerted chiefly into the outer part of the tip of the olecranum or elbow.

r The ſmaller point of the common tendon, inſerted at q ſ into the anterior part of the elbow, and the ridge that ſtands out from thence along the ulna.

Add here Fig. 5. and 7.

The *ſyſtematic connection* appears in Tab. VI. z—N in the arm; where the beginning of the longus D is covered by the teres minor *t* in the ſcapula. Then in Tab. V. *o—x* E in the arm; where the originations of the longus *p*, and of the brevis *o*, are covered by the deltoides *f*, &c.

Laterally its connection appears in Tab. IX. T—X in the left arm, and *a—e* in the right arm.

FIGURE VII.

The lower head of the triceps brachialis, commonly called the brachialis externus, repreſented in its outer part.

That this may appear, the longus and brevis, with part of the common tendon belonging to the three heads are cut off; under which tendon it is ſeated in its outer part. Particularly the fleſh of the longus is cut off at a—b; that of the brevis with the common tendon from b—c; and the part of the brevis cut off is outwardly tendinous, inwardly fleſhy.

d e The brachialis externus, in which are impreſſed the marks of the longus at d, and of the brevis at e.

f f f Its origin from the outer part of the os humeri, taking its beginning firſt near the bottom of the place into which the teres major is inſerted, and from thence with its anterior ſide or edge it takes an oblique courſe to the anterior margin of the os humeri, and thence to the root of the anterior condyle of that bone; and from the outer part of that root at g through the whole extent or height of the ſame.

And from its origin it occupies the whole breadth of the bone, that is contained betwixt its anterior and poſterior margin e e f f Fig. 5.

h A part that is tendinous.

i The tendinous portion, ariſing from the ſurface of the brachialis externus, and belonging to the larger condyle of the humerus k.

l The tendon common to the triceps.

m The tendinous part, that is formed by the longus, and joined to the common tendon.

Here then appears the manner in which the fleſh of the outer brachialis joins partly with the fleſh of the brevis and longus, partly with the tendons of thoſe two, and in part with the interior common tendon.

n The tendinous part, which the external brachialis forms and joins to the common tendon.

o o The common tendon, inſerted into the outer part of the tip of the olecranum or elbow.

p Here the brachialis externus extends its fleſhy part with the common tendon to the elbow.

Add here Fig. 5. and 6.

The *ſyſtematic connection* appears in Tab. VII. *o—y* in the arm.

FIGURE VIII.

The anconaeus.

a The tendon, by which it begins, and ariſes at b from the outer and lower part of the leſſer condyle of the humerus.

c c Its extremity, inſerted into the fore part of the elbow, juſt below the brachialis externus; alſo into the outer edge of the ulna below the ſaid part of the elbow.

The *ſyſtematic connection* appears in Tab. VI. Y, &c. in the arm. Then in Tab. V. F in the cubit or fore-arm; where it is partly covered by the tendon of the triceps brachialis *x*, and the outer ulnaris W.

Muſcles moving the Hand.

Add here the *biceps brachialis* Fig. 3. and 4.

FIGURE IX.

The radialis internus carpi.

a The tendinous beginning, by which it ſprings at b from the end of the poſterior condyle of the os humeri.

But it is to be obſerved that the radialis internus, palmaris longus, ulnaris internus and ſublimis, ariſe with one common tendinous head from the ſaid poſterior condyle of the humerus; with which head alſo the beginning of the

pronator teres coheres; and that the ſaid head detaches a ſort of branches or partitions to which at their originations thoſe muſcles adhere, or the parts of which tendinous head belong to each of thoſe muſcles, in the manner repreſented in the ſhorter radialis externus Fig. 11. l. But we have here repreſented each of thoſe muſcles ſeparated from one another according to the courſe of their fibres, in the ſame manner with the laſt mentioned. The foremen-tioned muſcles likewiſe in part ariſe from, or rather cohere with, the tendinous covering of the cubit.

c The tendon in which this muſcle ends, and which at d being increaſed in thickneſs, paſſes through the oblong ſinus that is ſeated on the inner part of the larger multangular bone, and is at laſt inſerted at e into the middle of the internal and upper part of the head of the firſt metacarpal bone that ſuſtains the index.

The manner in which the tendon enters the membranous canal, that is at the fore part of the ligament, which covers the tendons running from the cubit to the hand or the inner ſide of the wriſt, ſee in Tab. I. *O* W in the right hand. The channel itſelf ſee in Tab. II. p in the right hand, and in Tab. III. S in the right hand.

The *ſyſtematic connection* appears in Tab. I. *Y O* in the arm; where at its origin it lies under the pronator teres *W*, and the palmaris longus *a*; then under the ſupinator longus *P*; in the end the tendon paſſes into the middle of the palm.

Laterally its connection appears in Tab. IX. *m* in the right arm, and c d in the left arm.

FIGURE X.

The ulnaris internus, in its interior part.

a The tendinous beginning, ariſing at b from the greater condyle of the humerus, and cohering with the common tendinous head of the muſcles which ariſe from the ſaid condyle; from which head it is ſeparated in the manner mentioned in the radialis internus Fig. 9. Part of this common tendinous head runs a long way through the fore part of the muſcle at c.

d The origin of it from the elbow.

e e The thin and broad portion, that is a ſort of continuation of the ſaid origin d; and which here at f f goes off from the tendinous vagina or covering of the cubit g. Unleſs we ſhould rather ſay that this part ariſes tendinous from the ulna, together with the ſaid vagina, being ſtrictly conjoined with that into one.

h The tendon, in which it ends, inſerted at i into the prominent part of the piſiform bone of the wriſt, where that bone is moſt protuberant towards the palm. We have ſometimes ſeen this tendon, after inſerting itſelf into the piſiform bone, continue itſelf further on, to the crooked proceſs of the cuneiform bone of the carpus, and to be there inſerted.

Add here Fig. 11. a—h.

The *ſyſtematic connection* appears in Tab. II. A A B in the arm; where it is in part covered by the ſublimis C D H, and beneath that, alſo under the profundus. Then in Tab. I. *n o p* in the arm; where it is alſo covered by the ſublimis *f*, &c.

k The ligament, that is extended from the piſiform bone of the wriſt l, to the inner and upper part of the ſuperior head of the fourth metacarpal bone of the hand at m.

FIGURE XI.

The ulnaris internus, and ſhorter radialis externus, externally.

a—k The *ulnaris internus*.

a Its beginning, ariſing at b from the lower and back part of the greater condyle of the humerus, and cohering with the common tendinous head of the muſcles, which ariſe from the ſaid condyle.

c The beginning of it from the poſterior edge of the olecranum, but little below the end of the tendon of the triceps brachialis.

d d The thin and broad portion, which is a ſort of continuation of the ſaid beginning c, and which in this part e e goes off from the tendinous vagina of the cubit; if it does not rather ariſe with a thin tendinous beginning i, conjoined into one with the ſaid vagina, from the ſpine of the ulna k k, and which continuation ſtands out from the back part of the olecranum. In the part f g it ariſes below from the ſame ſpina ulnae.

h The tendon, inſerted into the piſiform bone.

Add here Fig. 10.

The *ſyſtematic connection* appears in Tab. VI. l—q in the arm. Then in Tab. V. R—V in the cubit.

Laterally it appears in Tab. IX. *q r ſ* in the right arm, and Y in the left arm.

l—r The ſhorter *radialis externus*.

l Its origin from the anterior and leſs condyle of the humerus, with a tendinous head common to the extenſor digitorum communis, the extenſor auricularis proprius and the ulnaris externus. But theſe muſcles cohere ſo together in their origin, that they may be either ſaid to ſpring from the os humeri by a common tendon, that ſends out branches or partitions dividing them into ſo many portions, from which partitions their fibres alſo continue to ariſe, and by which they cohere together; or elſe thoſe partitions may be eſteemed as a tendinous excurſion of the beginning of any two of the muſcles betwixt which they are placed, and from which the fibres of each proceed. Altho' more properly a portion of the common tendinous origin, and of the partition, belongs to each apart; but the parts thereof ſo ſtrictly cohere, and are conjoined one with the other, that they reſemble and may be accounted a tendinous origin common to them all, and branches or partitions common to each two next continuous muſcles. But here we have repreſented this radialis ſeparated according to the courſe of its fibres from the extenſor digitorum communis; becauſe whether we chuſe to ſay they have one common origin and partition, or refer the partition to one muſcle from whence the other may proceed, or rather aſcribe a part of the partition to each particular muſcle; in all theſe caſes the origin is ſtill from the anterior condyle of the humerus.

m The tendinous beginning, ſeparated from the ſaid common head. The tendinous part runs along for a conſiderable way at n n; where a ſinus is impreſſed by the common extenſor of the fingers.

o The inner portion, which is tendinous.

p The tendon, in which it ends: inſerted chiefly at q into the anterior and outer part of the root of the upper head of the metacarpal bone, that belongs to the middle finger; and likewiſe into the next adjacent upper head of the metacarpal bone of the index.

r The courſe of the tendon through the back part of the ſinus, which is the firſt or moſt anterior of thoſe in the outer or back part of the lower head of the radius; and it is retained or tied down by the outer armillary ligament of the carpus Tab. V. 16. in the right hand; and in Tab. IX. *f* in the left hand.

Add here Fig. 12.

The *ſyſtematic connection* appears in Tab. VII. G H I in the cubit; it partly lies under the longer radialis externus B E, and the ſupinator brevis K. Then in Tab. VI. V W X. in the arm; where it alſo lies under the longer radialis externus Q T, and the ſupinator brevis *D*, with the long abductor of the thumb *L*, the leſs extenſor of it *Y*, and the larger extenſor a c, with the indicator f h. Then in Tab. V. H I I I in the cubit; placed alſo under the longer radialis externus A D, the long abductor of the thumb 21, the leſs extenſor of it 24, and the larger 13; and alſo under the common extenſor of the fingers d r.

Laterally its connection appears in Tab. IX. l m m m in the left arm.

FIGURE XII.

The ſhorter radialis externus, in its fore part.

a The tendinous beginning.

b The tendon, in which it ends; inſerted chiefly at c into the upper and outer part of the root of the upper head of the metacarpal bone, that belongs to the middle finger; alſo into the next adjacent upper head of the metacarpal bone of the index.

d Its courſe through the poſterior part of the ſinus, which is the moſt anterior of thoſe in the outer or back part of the lower head of the radius: and it is there tied down by the outer armillary ligament e in the left arm of Tab. I.

Add here Fig. 11. l, &c.

The *ſyſtematic connection* appears in Tab. III. *w w x x y* in the left fore-arm, and *w x* in the right; where it in part lies under the longer radialis externus *ſ—t* in the left, and *q r* in the right cubit or fore-arm. Then in Tab. II. *ſ ſ s s s* in the left cubit, and *ſ s* in the right; where in like manner it lies under the longer radialis externus *n o p* in the left, and *l m* in the right fore-arm; alſo under the long abductor of the thumb Z, the leſs extenſor e, and the larger extenſor g, with the indicator *Y* in the left hand. Then in Tab. I. k k l l l in the left arm, placed likewiſe under the longer radialis externus f g i, the long abductor of the thumb *w*, with the leſs extenſor of it c, and the larger y in the hand; alſo under the tendon of the common extenſor of the fingers, belonging to the index o, and that to the ſupinator longus *P S* in the arm.

FIGURE XIII.

The longer radialis externus, in its outer and back part.

a a Its origin from the anterior edge of the os humeri, and continued along at b from the anterior or leſs condyle of that bone.

c The place where it joins and has a common origin with the extenſor digitorum communis of the hand, and with the ulnaris externus. See Tab. V. C in the cubit or fore-arm.

d The tendinous part of its beginning.

e The tendon in which it ends, inſerted at f into the outer and fore part of the root of the upper head of the metacarpal bone of the index.

æ The courſe of the tendon through the fore part of the ſecond ſinus, that is the moſt anterior of thoſe in the back part of the lower head of the radius; and it is tied down or confined by the outer armillary ligament 16, in the right hand of Tab. V. and which in Tab. IX. is marked *f* in the left hand.

g The interior part of this muſcle.

Add here Fig. 14.

The *ſyſtematic connection* appears in Tab. VII. B—F in the cubit, where its fore part is covered by the ſhorter radialis externus G H. Then in Tab. VI. Q—U in the arm, where at its origin it lies under the triceps brachialis L; but its tendon under the long abductor of the thumb *L*, the leſs extenſor of it *Y*, and the larger a c; alſo its fore part is covered by the ſhorter radialis externus V. Then in Tab. V. A—D in the cubit, where in like manner it lies under the triceps brachialis *r* in the arm, the long abductor of the thumb 21, in the cubit, its leſs extenſor 24, and the larger 13, with the ſhorter radialis externus H, and the ſupinator longus *z*.

Laterally its connection appears in Tab. IX. g h i i i k in the left arm.

FIGURE XIV.

The longer radialis externus, in its fore part.

a The tendinous beginning.

b c The diviſion of it into two parts, of which b is the principal.

d The tendon in which the chief portion ends, and which is larger than the other.

e The tendon in which the leſs portion ends, and which conjoins itſelf with the other tendon d, and forms therewith,

f The common tendon, inſerted at g into the outer and fore part of the root of the upper head of the metacarpal bone that ſuſtains the index.

h The courſe of the tendon through the fore part of the ſecond ſinus, which is the moſt anterior of thoſe in the back part of the lower head of the radius; and it is tied down by the outer armillary ligament, Tab. I. e in the left wriſt.

Add here Fig. 13.

The *ſyſtematic connection* appears in Tab. III. *ſ—u* in the left cubit, and *q r* in the right cubit, where at its origination it lies behind the brachialis internus *o*. Then in Tab. II. *c—r* in the left cubit, and *l m* in the right cubit, where, as before, it lies behind the brachialis internus *i*, and is alſo covered by the long abductor of the thumb Z, (and a b d in the right cubit) with the leſs extenſor of the thumb e, and the larger extenſor g. Then in Tab. I. f g h i in the left arm, and g h in the right; there likewiſe ſeated under the long abductor of the thumb *w* (*x* b in the right arm) the leſs extenſor c, and the larger extenſor y in the left hand, and alſo under the long ſupinator *P* in the arm.

FIGURE XV.

The ulnaris externus.

a The tendinous beginning ariſing at b from the outer part of the anterior condyle of the os humeri, where it is ſeparated from the origin of the common extenſor of the fingers, and proper extenſor of the little finger, as alſo from the common head of the ſhorter radialis externus, Fig. XI. See it conjoined in Tab. V. X in the cubit.

Alſo a pretty broad and thin portion is ſent off by this tendinous origin, from below the end of the anconaeus, at the outer part of the anterior edge in the middle of the ulna, to this muſcle.

c Part of the tendinous vagina or covering, ſeated next under the common integuments, and binding together the muſcles that lie on the outer part of the cubit, ariſing together with the tendinous beginning a from the condyle b. From the inner ſide of this portion the ulnaris externus ariſes, and conjoins the beginnings of its fibres therewith.

d d The place where the vagina is cut off a little below the origin of the ulnaris from it.

e The tendon in which it ends. f the courſe of it through the anterior and outer ſinus or groove in the lower end of the ulna, where it is retained or tied down by a ligament 14. 15. 17. in the right hand of Tab. V. and in the left hand *c a*, and in Tab. IX. *f* in the left hand.

g Its inſertion into the upper part of the eminence that is in the back part of the upper head of the fourth metacarpal bone of the hand.

The *ſyſtematic connection* of it appears in Tab. V. W—Z in the cubit, where at its end it goes a little way under the abductor of the little finger *b* in the right hand.

Laterally its connection appears in Tab. IX. n o in the left arm, and *t* in the right.

FIGURE XVI.

The ſupinator longus.

a b The tendinous beginning which has here a diviſion, and ariſes at c d d from the lower part of the anterior edge of the os humeri, juſt above the origin of the longer radialis externus.

a b e The ſinuoſity that is impreſſed by the brachialis internus.

f The tendon in which it ends, and is inſerted at g into the fore part of the lower head of the radius, at the beginning of that ſinus through which the tendons of the long abductor and leſs extenſor of the thumb paſs from the cubit to the hand.

The *ſyſtematic connection* appears in Tab. I. *P S* in the arm, where at its beginning it lies under the brachialis internus *L*, and towards its inſertion under the long abductor of the thumb *x* b, and the leſs extenſor c.

Poſteriorly its connection appears in Tab. V. *z* in the cubit or fore arm, where at its origin it is covered by the triceps brachialis *o r* in the arm, and then by the longer radialis externus, A in the cubit.

Laterally its connection appears in Tab. IX. Z. a in the left arm, and *k* in the right.

FIGURE XVII.

The ſupinator brevis in its outer part.

a The tendon, ariſing at b from the lower part of the end of the anterior condyle of the os humeri.

c c The part that is outwardly tendinous, ariſing all the way tendinous at d e from the outer part of the capſular ligament, that inveſteth the juncture of the radius with the humerus and ulna, from which ligament it is cut off; e f its origin from the fore part below the ſinus of the ulna, by which its head is articulated with the radius, from whence it is continued for ſome way downwards.

g Its extremity inſerted into the radius.

Add here Fig. 18.

The *ſyſtematic connection* appears in Tab. VIII. *H*, &c. in the arm. Then in Tab. VII. K, &c. in the cubit, where it is partly covered by the ſhorter radialis externus G. Then in Tab. VI. *D* in the arm, where it is partly covered by the ſaid radialis externus V, and in part by the anconaeus Y; and what is there naked, in Tab. V. lies under the ulnaris externus W, the common extenſor of the fingers d, and the proper extenſor of the little finger a b, in the cubit.

FIGURE XVIII.

The ſupinator brevis in its interior part.

a. The tendon by which it begins.

b The place where it inſerts itſelf near the upper eminence of the radius, into which the biceps brachialis is inſerted. It is alſo inſerted at c c c round the margin of the tubercle that is next above the ſaid eminence, from the upper part of it forward and downward. After this it is continued obliquely forward along the inner part of the radius almoſt to the middle of its length, and from thence outward, on the back of the cubit. Add here Fig. 17.

e The back part of this muſcle is ſeen betwixt the radius and ulna.

Add here Fig. 17.

The *ſyſtematic connection* appears in Tab. IV. b—f in the cubit. Then in Tab. III. *z—H* in the cubit, where it is in part covered by the brachialis internus *o p*, by the longer radialis externus *q* (and *ſ* in the left arm) and by the ſhorter ditto *w*, the pronator teres *L*, the long flexor of the thumb *P S*, and the profundus C. Then in Tab. II. *t—w* in the cubit, covered likewiſe, as in Tab. III. by the brachialis internus *i k*, the longer radialis externus *l*, (and *n* in the left arm) the ſhorter ditto *ſ*, the pronator teres *y*, and the profundus *x*; and moreover, by the tendon of the biceps brachialis *c*, and the ſublimis G. Then in Tab. I. *X* in the arm, covered by the tendon of the biceps brachialis *C*, the brachialis internus *L*, the ſupinator longus *P*, and the pronator teres *W*.

FIGURE XIX.

The pronator teres, in its inner part.

a a Its origination from the inner and upper part of the poſterior condyle of the os humeri.

b The part that is outwardly tendinous.

c The tendon in which it ends.

Add here Fig. 20.

The *ſyſtematic connection* appears in Tab. I. *W* in the arm, where its end goes under the ſupinator longus *P*. Then in Tab. II. where its extremity *y* in the cubit goes under the ſhorter radialis externus *ſ s*. So in Tab. III. the extremity of it *L* in the cubit goes under the ſame radialis *w x*.

Laterally its connection appears in Tab. IX. *l* in the right, and b in the left.

FIGURE XX.

The extremity of the pronator teres, in its outer part.

a The tendinous end, inſerted at b b into the unequal ſurface that is formed for that purpoſe in the gibbous part of the radius.

Add here Fig. 19.

The *ſyſtematic connection* appears in Tab. VI. lying under the ſhorter radialis externus V, and the long abductor of the thumb *L*, in the arm.

FIGURE XXI.

The pronator quadratus, in its inner part.

a a The tendinous ſurface.

b b Its origin, from the oblong eminence in the inner and back part of the ulna, not much above the lower head of that bone.

c c Its inſertion into the lower part of the radius, as well into the flat interior ſurface of it, as into the ſide that is next the ulna, and which cannot be ſeen in the figure.

Add here Fig. 22.

The *ſyſtematic connection* appears in Tab. IV. g—k in the cubit. Then in Tab. II. *X X* in the cubit, where the greater part is covered by the long flexor of the thumb *P S*, and the profundus E F G. Then in Tab. II. Y in the cubit, covered as before by the long flexor of the thumb S T, alſo by the long abductor of the thumb a b d, and ulnaris internus A B. Then likewiſe in Tab. I. *t* in the arm, where it is covered by the long flexor of the thumb *q*, and by its long abductor *x z* b, and ulnaris internus *n*.

Poſteriorly its connection appears in Tab. VIII. *W* in the right arm. Then in Tab. VII. P in the right cubit. But in Tab. VI. it lies under the indicator f h, the larger extenſor of the thumb a c, and the leſs extenſor of ditto, *Y* with the long abductor *L* in the arm.

Add to theſe Tab. VIII. *W* in the left arm. Then in Tab. VII. P in the left cubit, where it is in part covered by the profundus S T, &c. Then in Tab. VI. r in the left arm, where it is covered by the ulnaris internus l q. So likewiſe in Tab. V. *e* in the extremity of the left cubit, where it is alſo covered by the ulnaris internus R V.

FIGURE XXII.

The pronator quadratus laterally.

a a Its tendinous ſurface.

b b Its origination from the oblong eminence in the inner and back part of the ulna, not much above its lower head.

Add here Fig. 21.

THE

Twentieth Anatomical Table

OF THE

HUMAN MUSCLES

EXPLAINED.

Muſcles of the Fingers.

FIGURE I.

The common extenſor of the fingers, with the proper extenſor of the little finger.

a—z The *extenſor communis digitorum manus.*

b The tendinous beginning, ariſing at c from the end of the anterior condyle of the os humeri. But it is a part of the common tendinous head of which we ſpoke in deſcribing the ſhorter radialis externus l Fig. 11. Tab. XIX. And as there the ſaid radialis is ſeparated according to the courſe of its fibres from this extenſor, ſo this extenſor, with the proper extenſor of the little finger, is on one ſide ſeparated in like manner from the ſaid radialis, and on the other ſide from the ulnaris externus.

d Part of the tendinous vagina or caſe, that binds together the muſcles that lie on the outer part of the cubit, immediately after the common integuments; and ſpringing with a tendinous origin b from the condyle c. But this part of the ſaid vagina or caſe, is that from under which the preſent common extenſor of the fingers ariſes, or with which the beginnings of its fibres are conjoined.

e e The edge from whence the reſt of the ſaid tendinous ſwath or vagina is cut off, where the fibres of the muſcle no longer ariſe from it.

f The portion belonging to the index. g the tendon in which it ends, and which is afterwards conjoined with the tendon of the indicator V, whence is formed the common tendon h.

i The tendon belonging to the middle finger, and in which tendon is formed the ſlit k, as it deſcends over the back of the hand. The fleſhy portion that forms this tendon, lies under the two other portions f l.

l The portion belonging to the ring finger. m the tendon in which it ends, and which in its deſcent over the back of the hand has the ſlit n. o the branch of it that joins the tendon of the middle finger, and is not always to be found. p the branch of the ſame tendon that afterwards divides into two, one of which q joins the tendon *e* of the little finger, but is not conſtantly found: The other r again divides into two, and ſends one portion s to join the tendon of the little finger *e f*, or rather to the tendon q, that is conjoined with the tendon belonging to the little finger.

v The tendinous portion by which the trunk of the tendon m n belonging to the ring finger is conjoined with the tendon *e f* of the little finger, near its beginning; which portion is formed of the two parts s and u, going off from the aponeuroſis w, of the tendon m n conjoined together below into one.

x The tendinous portion by which the trunk of the tendon m n belonging to the ring finger, is conjoined with the tendon i of the middle finger. And this portion is formed of the tendon o conjoined with the aponeuroſis y, that goes off from the trunk of the tendon m n of the ring finger, near the root of the ſaid finger.

z The aponeuroſis, which ariſing from the tendon i of the middle finger, goes to the tendon g of the index, and conjoins together near the roots of the fingers.

This figure ſhews the manner in which the tendons paſs through the third ſinus in the lower head of the radius, and which is the moſt poſterior of thoſe in the outer ſide of the wriſt; but for the manner in which they are tied down therein by the outer armillary ligament, ſee Tab. V. 16 in the right hand, and Tab. I. e in the left arm; alſo Tab. IX. *f* in the left hand.

The *ſyſtematic connection* appears in Tab. V. d, &c. in the cubit. Alſo in Tab. I. m n o p q in the left arm. And in Tab. IX. p q r s t in the left arm and hand.

a—f The extenſor proper to the little finger.

b Its beginning, conjoined with the beginning of the common extenſor of the fingers.

c Part of the tendinous ſwath of the cubit before mentioned at d. From beneath which the fibres of this muſcle ariſe.

d d The edge from whence the reſt of the ſwath is cut off, where the fibres no longer proceed from it.

e The tendon in which it ends, having a ſmall ſlit at *f* in its deſcent over the back of the hand.

For the manner in which it is retained by the outer armillary ligament, ſee Tab. V. 16 in the right hand, and in Tab. I. e in the left arm, and in Tab. IX. *f* in the left hand.

The *ſyſtematic connection* appears in Tab. V. a, &c. in the cubit.

Alſo in Tab. I. r s in the left arm. And in Tab. VII. 5 in the left hand. Alſo in Tab. IX. v w in the left arm and hand, and in the right hand.

g h i k The extenſor tendons, conjoined on the backs of the fingers with the aponeuroſes and tendons of the muſculi interoſſei, lumbricales, &c. of which *g*, belonging to the little finger, is formed by the tendon *e* of the proper extenſor of the little finger, conjoined with the portions q s u w from the common extenſor. *h* that of the ring finger, and *i* that of the middle finger, are from the common extenſor. *k* That of the index is formed by the tendon of the indicator V, conjoined with the tendon g from the common extenſor.

l l l l The ends of thoſe tendons, inſerted each of them at *m* into the tranſverſe oblong protuberance in the outer part of the upper head of each bone of the ſecond phalanx or order.

n o The conjunction of the tendon of the index with the tendon of the firſt lumbricalis *n*; and with the tendon *o* of the poſterior interoſſeus of the index.

p q The conjunction of the tendon of the middle finger with the tendon *p*, that is common to the anterior interoſſeus of the middle finger and ſecond lumbricalis; and with the tendon of the poſterior interoſſeus of the middle finger.

r ſ The conjunction of the tendon of the ring finger with the tendon *r*, that is common to the anterior interoſſeus and third lumbricalis of the ring finger.

t u The conjunction of the tendon of the little finger with the tendon *t*, that is common to the anterior interoſſeus and fourth lumbricalis of the little finger; and with the tendon *u* that is common to the abductor and ſmall flexor of the little finger.

w The tendon of the firſt lumbricalis here cut off; which tendon conjoins itſelf with the tendon of the index *n*, and being increaſed by a portion received from thence, runs to the third bone *x*. Add here q r r s t Fig. 3.

y The tendon of the poſterior interoſſeus of the index, here cut off; which tendon conjoins itſelf with the tendon *o* of the index, and being increaſed by a portion received from thence, it runs to the third bone *z*. See t, &c. Fig. 6.

A The common end, in which the tendons *x z* conjoin themſelves, inſerted at B into the middle protuberance in the outer part of the upper head of the third bone.

C The tendon common to the anterior interoſſeus and ſecond lumbricalis of the middle finger, here cut off; which tendon conjoins itſelf at *p* with the tendon of the middle finger, and being increaſed by a portion received from thence, it runs to the third bone D. Add here v, &c. Fig. 9.

E The poſterior interoſſeus of the middle finger, here cut off; which tendon conjoins itſelf with the tendon *q* of the middle finger, and being increaſed by a portion received from thence, it runs to the third bone F. Add here m, &c. Fig. 9.

G The common end, in which the tendons D and F conjoin themſelves, inſerted at H into the middle protuberance in the outer part of the upper head of the third bone.

I The tendon common to the anterior interoſſeus and third lumbricalis of the ring finger, here cut off; which tendon conjoins itſelf with the tendon *r* of the ring finger, and being increaſed by a portion received from thence, it runs to the third bone K. Add here k, &c. Fig. 6.

L The tendon of the poſterior interoſſeus of the ring finger, here cut off; which tendon conjoins itſelf with the tendon *ſ* of the ring finger, and being increaſed by a portion received from thence, it runs to the third bone M. Add here a, &c. Fig. 9.

N The common end, in which the tendons K M conjoin themſelves, inſerted at O into the middle protuberance in the outer part of the upper head of the third bone.

P The tendon common to the anterior interoſſeus and fourth lumbricalis of the little finger, here cut off; which tendon conjoins itſelf with the tendon *t* of the little finger, and being increaſed by a portion received from thence, it runs to the third bone Q. Add here a, &c. Fig. 6.

R The tendon common to the abductor and ſhort flexor of the little finger, here cut off; which tendon conjoins itſelf with the tendon *u* of the little finger, and being increaſed by a portion received from thence, it runs to the third bone S. See Fig. 10. and 11.

T The common end, in which the tendons Q S conjoin themſelves, inſerted at U into the middle protuberance in the outer part of the upper head of the third bone.

The *ſyſtematic connection* appears in Tab. V. *y z c d e g h i k.* x z *n o p r ſ t u.* w z *y z C X P S W.* v z 2 3 4 7 8 9 10 in the right hand. Alſo in Tab. VI. *a e g h i l m n o. b e ſ s v u w x y.* c e c f g l m n o. *d e r s t v w x y* in the right hand. Likewiſe in Tab. VII. b f g h i k n o p q. c f u v w *z a b c.* d f *g h i n o p q.* e f *s v t w x y z* in the right hand.

See alſo Tab. I. K L I M N O. P R. P. Q in the left hand. And in Tab. II. 8 9 11 12 13 14. 6 15. 6 3 in the left hand. In Tab. III. m n r s t u. v y x. w. x in the left hand. Then in Tab. V. *y z C D D* in the left hand. Alſo in Tab. VI. *l m n o o* in the left hand. Then in Tab. VII. 5 6 7 8 9 10 in the left hand. Alſo in Tab. VIII. q r. p in the left hand. Then in Tab. IX. *s v t w w x y z* in the left hand, and in the right hand.

Concerning the aponeuroſes which join the extenſor tendons from the interoſſei, lumbricales, &c. ſee thoſe muſcles.

V The tendon of the indicator cut off. See Fig. 12. d.

FIGURE II.

The profundus, in its outer part.

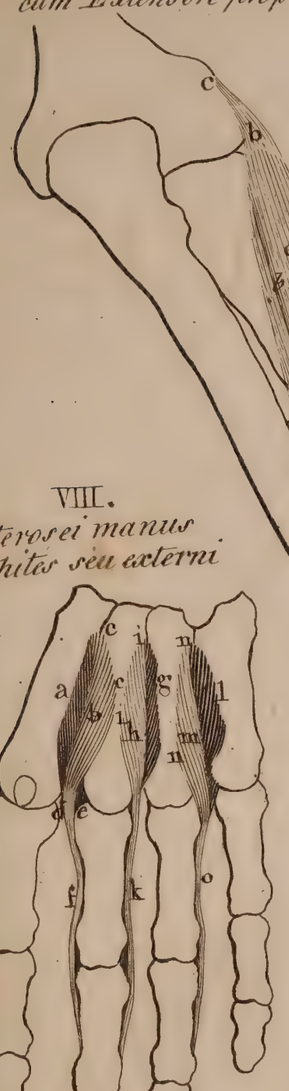
a a Its origination from the back part of the ulna, beginning below the root of the olecranum or elbow.

Add here Fig. 3.

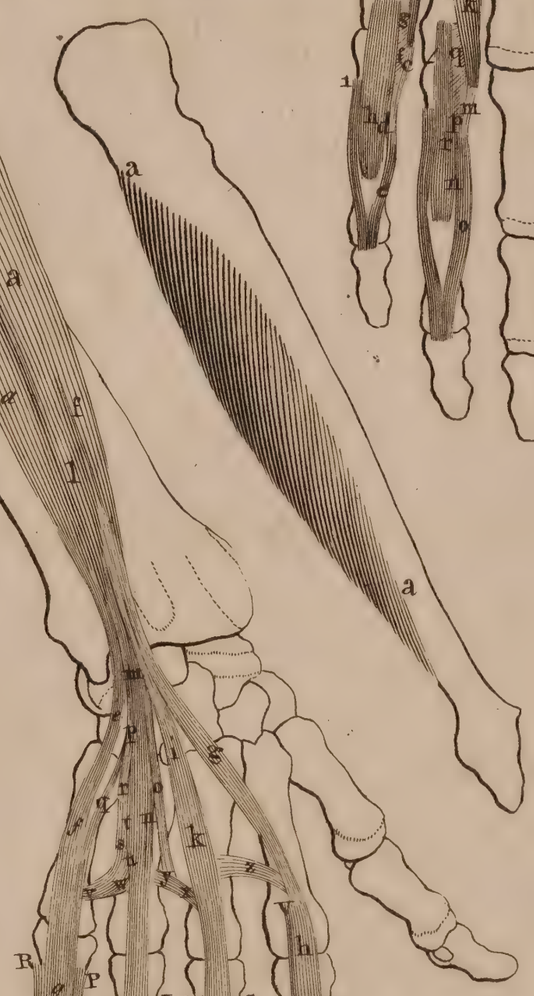
The *ſyſtematic connection* appears in Tab. VII. R S S in the right cubit. Then in Tab. VI. i k k in the right arm, where it is partly covered by the ulnaris internus l. Then in Tab. V. K in the right cubit, where it is alſo in part covered by the ulnaris internus R, and is likewiſe hid behind the ulnaris externus W.

TAB XX.

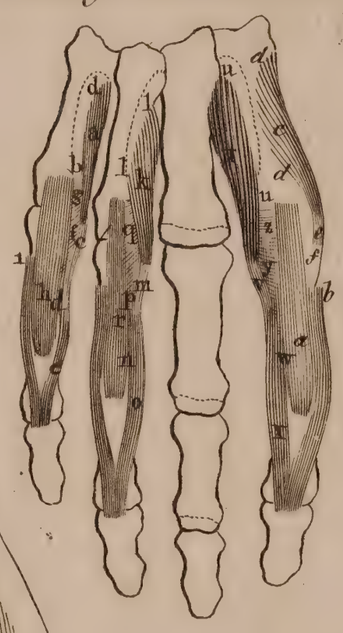
I.
Extensor communis digitorum manus cum Extensore proprio auricularis



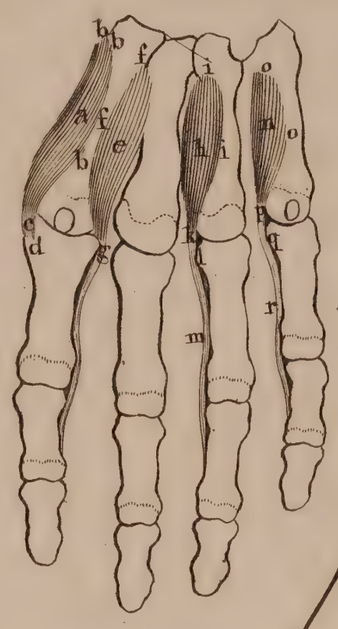
II.
Profundus.



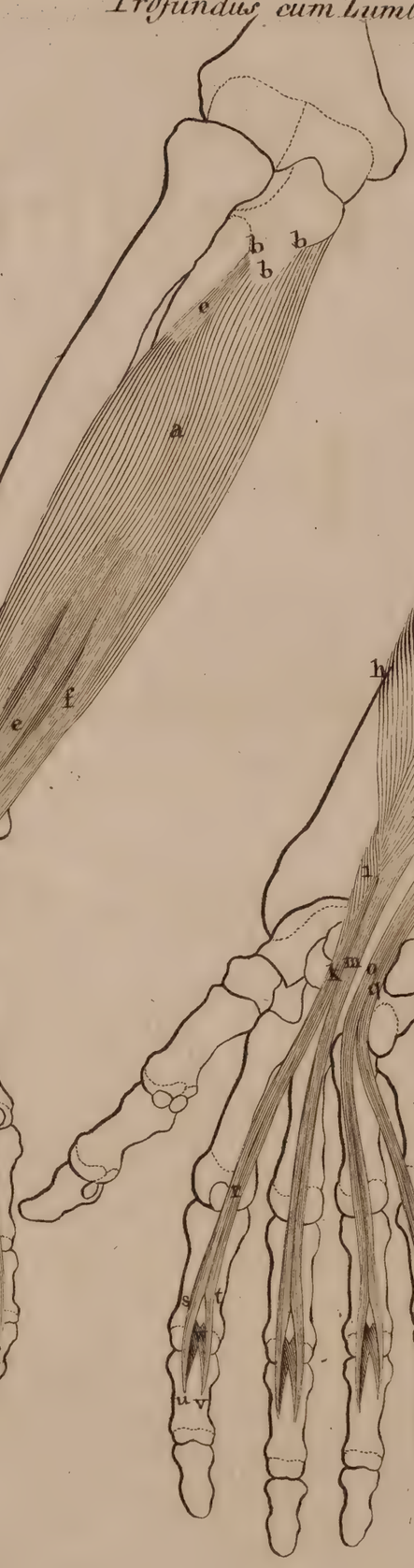
VI.
Interossei manus Interni



VII.
Interossei manus Interni.

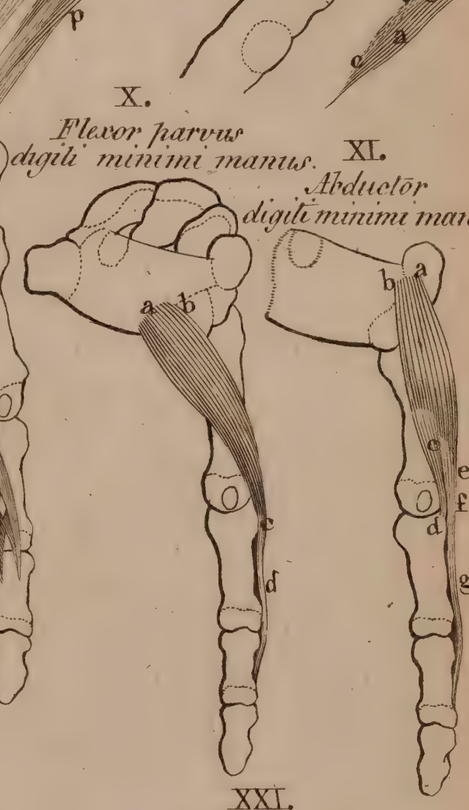


III.
Profundus cum Lumbricalibus.

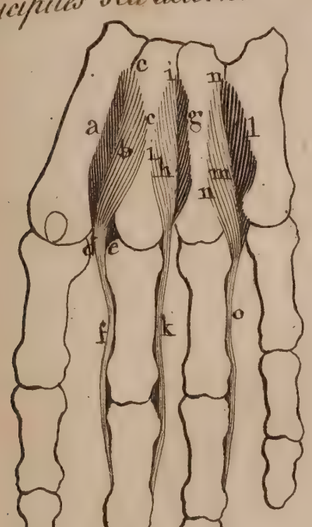


IV.
Sublimus.

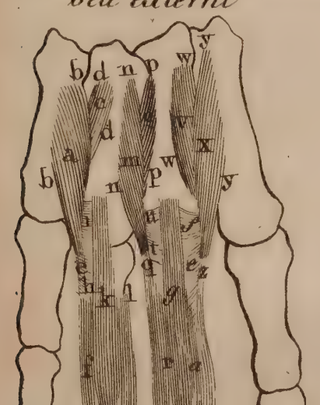
V.
Sublimus



VIII.
Interossei manus bicipites seu externi

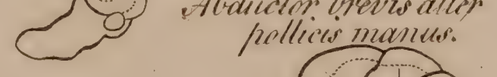


IX.
Interossei manus bicipites. seu externi

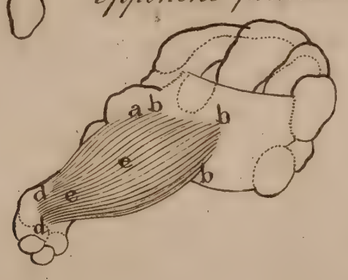


XVI.
Abductor brevis pollicis manus.

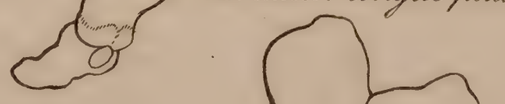
XVII.
Abductor brevis alter pollicis manus.



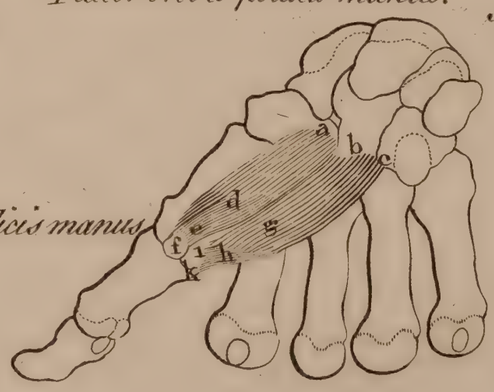
XV.
Opponens pollicis manus.



XVIII.
Abductor longus pollicis manus

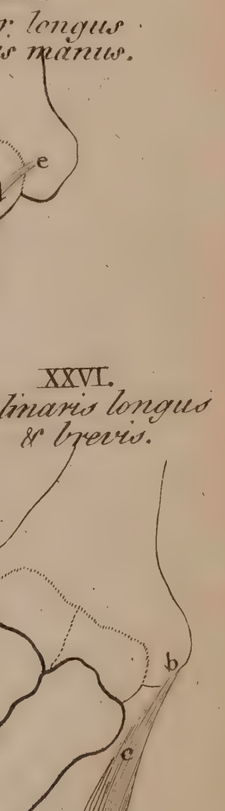


XX.
Flexor brevis pollicis manus.



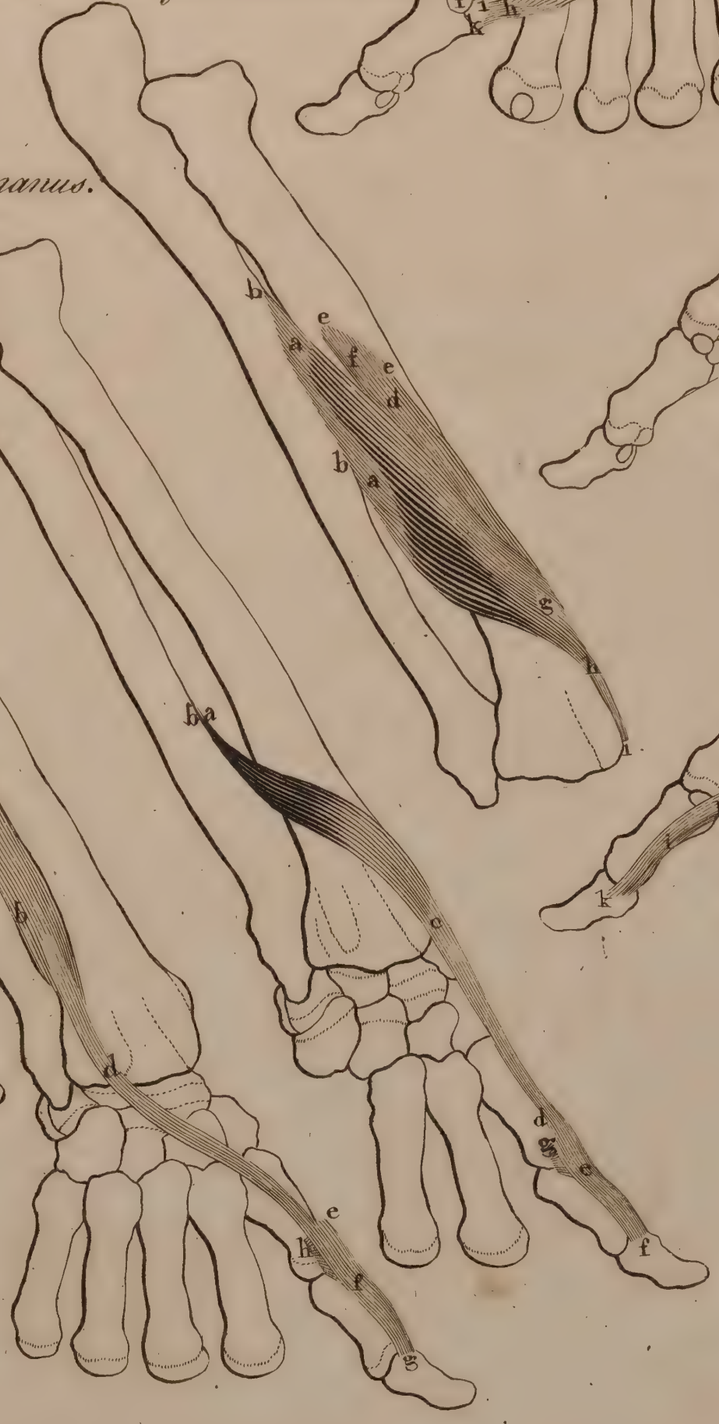
XIX.
Abductor longus pollicis manus.

XXI.
Flexor longus pollicis manus.



XII.
Indicator.

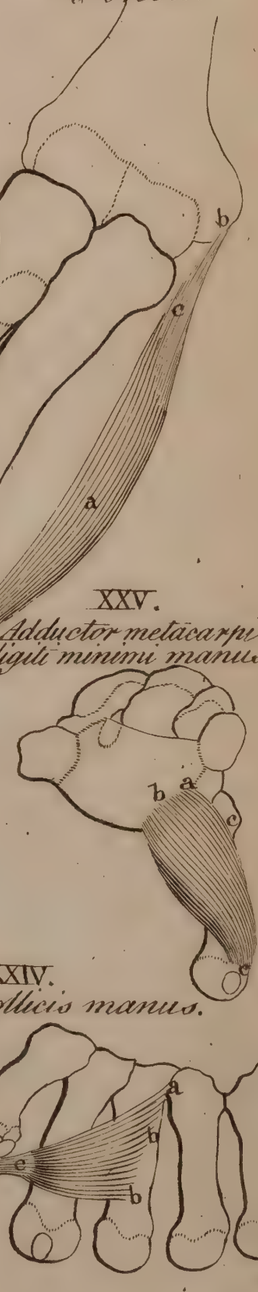
XXIII.
Extensor minor pollicis manus.



XXII.
Extensor major pollicis manus.

XIII.
Abductor indicis manus.

XXVI.
Palmaris longus & brevis.



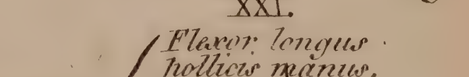
XIV.
Abductor indicis manus.

XXV.
Adductor metacarpi digiti minimi manus.

XXIV.
Adductor pollicis manus.

XI.
Abductor digiti minimi manus.

X.
Flexor parvus digiti minimi manus.



A Bell Sculpt.

FIGURE III.

The profundus, in its inner part, with the lumbricales.

a—p The *profundus flexor* of the fingers.

b b b, Its origin from the ulna, below the unequal ſurface into which the brachialis internus is fixed. Below which alſo its origin occupies more than half the upper part of the inner ſide of the ulna; ariſing alſo from the adjacent part of the ligament that is placed betwixt the radius and ulna. And its origination is here figured, ſeparated from its coheſion with the ſublimis and ulnaris internus.

c Part of the tendinous beginning.

d. e. f Three tendons ariſing from the fleſh. The firſt of which d goes into the tendon g h of the index. The ſecond e ends in the tendon i k of the middle finger. The third f divides into two, one of which l m goes to the ring finger, the other n o to the little finger. As thoſe tendons run along the palm and fingers, they are in a manner ſplit longitudinally, and appear as if formed of two conjoined together h. k. m. o: at laſt they are inſerted at p. p. p. p into rough ſurfaces, that are in the inner ſides of the bones of the third phalanx or order, at the root of the upper head of each of them.

g. i. l. n The paſſage of the tendons through the inner carpal ſinus, and under the inner carpal ligament; for which ſee Tab. III. N in the right hand.

The vaginæ or ſheaths by which theſe tendons, and thoſe of the ſublimis, are covered as they paſs along the joints of the fingers with the metacarpus, ſee in Tab. I. 4 4 4 &c. in the right hand. Alſo the ligamentary ſheath, by which theſe and the tendons of the ſublimis are tied down at the joints of the bones of the firſt phalanx, may be ſeen at 3, &c. in the right hand of the ſame Table; in which alſo may be ſeen thoſe at 5, &c. in the ſame hand, that cover the tendons as they paſs over the bones of the ſecond phalanx.

Add here Fig. 2.

The *ſyſtematic connexion* appears in Tab. III. C C &c. in the cubit; where part of it lies under the long flexor of thumb *P W*, and the tendons K L lie partly under the abductor of the fourth metacarpal bone of the hand U, and all of them H. I. K. L under the lumbricales c. g. k. n. Then in Tab. II. *x x* R *i i' k*, &c. in the cubit and right hand (*x* in the left cubit, and hand for the tendons); where it lies under the ſublimis C &c. in the cubit, and the tendons of the ſublimis L. I. N. P; the tendon belonging to the little finger, alſo lies under the abductor of the fourth metacarpal bone *x* in the hand, and the ſmall flexor of the little finger *t*. Then in Tab. I. *f* in the arm, and y z, &c. in the right hand (V, &c. in the left hand) where the reſt of it lies under the ſublimis *f f*, &c. in the arm, and the pronator teres *W*; its tendons lie under the aponeuroſis of the palmaris longus *c*, with the tendons of the ſublimis x &c. in the hand.

Then again in Tab. VII. R—W in the left cubit and hand. Alſo in Tab. VI. i the left arm, and *p. p* in the hand. Alſo in Tab. V. K in the left cubit, and *X P S*, &c. in the hand. And laterally in Tab. IX. in the fingers of the left hand.

q—t The *firſt lumbricalis;* r r its origination, the thicker portion of thoſe two parts into which the tendon of the profundus belonging to the index, is in a manner ſplit longitudinally. And it ariſes from that ſide of the tendon, that is over-againſt the aponeuroſis of the palmaris longus.

s The tendon, that joins the common tendon of the extenſor of the index, and then ends in the third bone of the index.

t The aponeuroſis, that it joins with the aponeuroſis of the abductor indicis, and together with that joins the common tendon of the extenſor indicis.

Add here Fig. 1. *w* &c. and Fig. 6. *b*.

u—y The *ſecond lumbricalis;* its moſt conſiderable part w ariſing from the thicker portion of thoſe two into which the tendon of the profundus belonging to the middle finger, is in a manner ſplit longitudinally; and from that ſide of the tendon that is oppoſed to the aponeuroſis of the palmaris longus: then again by a leſs conſiderable and ſlenderer portion w, it ariſes from the tendon belonging to the index; and principally from that part of the ſaid tendon, which is next the bottom of the palm.

x The tendon of it, that is afterwards conjoined with the tendon of the anterior interoſſeus of the middle finger, and with that forms the common tendon y conjoining itſelf with the tendon of the extenſor communis, and ending in the third bone of the middle finger.

Add here Fig. 8. e, and Fig. 1. C.

z—*d* The *third lumbricalis;* ariſing like the ſecond with its moſt conſiderable part *a a* from the thicker of thoſe portions, in which the tendon of the profundus belonging to the ring finger, is in a manner ſplit longitudinally; and its leſs conſiderable part *b*, from the tendon belonging to the middle finger, but from the ſlenderer portion thereof.

e Its tendon, which being conjoined with the tendon of the anterior interoſſeus of the ring finger, therewith forms the common tendon *d*, conjoining itſelf with the tendon of the extenſor communis, and belonging to the third bone of the ring finger.

Add here Fig. 7. l, and Fig. 1. I.

e—*i* The *fourth lumbricalis;* ariſing like the ſecond with its moſt conſiderable part *f f* from the thicker of thoſe portions, into which the tendon of the profundus belonging to the little finger, is in a manner ſplit longitudinally; and its leſs conſiderable part *g* ariſes from the ſlenderer portion of the tendon belonging to the ring finger.

h Its tendon, which being afterwards conjoined with the tendon of the anterior interoſſeus of the little finger, forms therewith the common tendon *i*, that joins the tendon of the extenſor of the little finger, and ends in the third bone of the ſaid finger.

Add here Fig. 7, q, and Fig. 1. P.

The *ſyſtematic connexion* appears in Tab. III. c f e. g w. k s n p in the right hand; where the fourth in part lies under the abductor of the fourth metacarpal bone of the hand U: but at its origin it lies hid behind the inner annular ligament of the wriſt N. Then in Tab. II. *c e. f n. g q. h s* in the right hand; where it is partly covered by the tendons of the ſublimis P. N. I. L; the firſt being hid by the ſecond ſhort abductor of the thumb u, the fourth by the ſhort flexor of the little finger *t*: and they are alſo hid behind the inner annular ligament of the wriſt l. Then in Tab. I. *O* w. l u. k s. i q in the right hand; where the greateſt part of it is covered by the aponeuroſis of the palmaris longus *c*; and the firſt is alſo covered by the ſecond ſhort abductor of the thumb *L*. Add here Tab. IV. *a b. g h o p* in the right hand.

Moreover in Tab. III. o p q in the left hand. In Tab. II. 11. 10 in the left hand. In Tab. I. I H in the left hand. In Tab. VII. *w* 1 in the right hand. In Tab. VI. v 1 in the right hand. In Tab. V. 7. 6 in the right hand. In Tab. VII. 1. 2. 3. 4 in the left hand. In Tab. VI. *b c d e* in the left hand. In Tab. V. *p* in the left hand. In Tab. IX. *r t f* in the left hand.

FIGURE IV.

The ſublimis.

a The tendinous beginning, ariſing at b from the inner part of the greater condyle of the humerus. But it is ſeparated from the common tendinous head, by which it ariſes with the other muſcles from that condyle, in the manner we deſcribed in ſpeaking of the radialis internus at a Fig. 9. Tab. XIX.

c The portion ariſing with a ſmall tendon c from the fore part of the eminence of the ulna, into which the brachialis internus is inſerted, near the end of the ſaid brachialis.

e The broad and thin head from the radius.

f The tendinous part of the origin from the radius.

g g The origin of this head from the radius, from the inner ſide nearly of its middle, beginning the near end of the ſupinator brevis and pronator teres; and from thence alſo continuing to ariſe at g h.

i The portion belonging to the index. k the tendon in which it ends.

l The portion belonging to the middle finger. m the tendon in which it ends.

n The portion belonging to the ring finger. o the tendon in which it ends.

p The portion belonging to the little finger. q the tendon in which it ends.

k m o q The paſſage of the tendons thro' the inner concave part of the wriſt, under the inner ligament of the wriſt; for which ſee l in the right hand of Tab. II.

r The tendon ſplit in a manner longitudinally; which is alſo in the reſt.

s. t The two horns, into which the tendon ſplits itſelf; inſerted at u. v into the inner part of the edge in the middle of the bone of the ſecond phalanx; the one into the anterior, the other into the poſterior edge. The reſt are inſerted after the ſame manner with this.

w The thin portion, by which thoſe horns cohere together under the tendon of the profundus. The ſame alſo takes place in the other fingers as in this.

The ligamentary ſheaths by which theſe, with the tendons of the profundus are tied down as they paſs over the bones of the firſt phalanx, may be ſeen in Tab. I. 3. &c. in the right hand. As alſo the ſheaths that cover them at the joints of the fingers with the metacarpus, there marked 4. 4 4. &c. with thoſe which their extreme horns paſs under, at 5. &c.

Add here Fig. 5.

The *ſyſtematic connexion* appears in Tab. II. C—Q in the cubit; where part of it is covered by the pronator teres *y*; the tendons I and L in the hand lie partly under the ſmall flexor of the little finger *t*; the tendon P, under the ſecond abductor of the thumb u: and all of them at their extremities under the tendons of the profundus *i. i. i. i.* Then in Tab. I. *f*—*m* in the arm; where it in part lies under the palmaris longus *a b*, partly under the radialis internus *Y O*, in part under the ſupinator longus *P S*, and pronator teres *W*: alſo in the right hand its tendons appear at x 2. 2. &c. where a great part of them are covered by the aponeuroſis of the palmaris longus *c*, and at their extremities they lie partly under the tendons of the profundus y. &c.

Moreover in Tab. VI. s—*a* in the arm; where in the cubit it in part lies behind the ulnaris internus l, and the profundus i. And in Tab. V. M—Q in the cubit, placed alſo under the ſame muſcles; and moreover the tendons *X P* &c. appear in the left hand. Laterally in Tab. IX. e e in the left arm, and the tendons in the hand: and in the right arm *p*. Alſo in Tab. II. the tendons appear in the fingers of the left hand. Alſo in Tab. I. S &c. in the left hand.

FIGURE V.

The ſublimis.

a The ligament, that goes from the lower part of the poſterior condyle of the humerus, to the back part of the upper head of the ulna, near the bottom of its lunar ſinus.

b c c Part of the ſublimis cut off, where it ariſes from the condyle b, and c c that from the ligament a, and from the upper and back part of the rough edge or ridge of the ulna, into which the brachialis internus is inſerted.

Add here Fig. 4.

FIGURE VI.

The inner interoſſei of the hand, viewed in their outer ſurface.

a The *interoſſeus of the little finger*, ariſing at b b from that ſide of the metacarpal bone of the ſaid finger, that lies next the metacarpal bone of the ring finger, and particularly from more than its upper half, juſt below the root of its upper head; except that part of its breadth that is near the back of the hand, and from whence the ſmaller head of the poſterior interoſſeus of the ring finger ariſes at a Fig. 9.

c Its tendon, which having received a part from the inner ſide of the tendon of the fourth lumbricalis, conjoins itſelf with the tendon of the proper extenſor of the little finger, and being increaſed by a portion received from thence, runs to the third bone of the little finger e.

f g The aponeuroſis, that joins the tendon of the extenſor; and is produced in its lower part f from the tendon c; in its upper part g coming from the capſular ligament of the joint of this finger with its metacarpal bone.

Add here Fig. 1. P &c, and Fig. 7. n &c.

The *ſyſtematic connexion* appears in Tab. VII. m n o p r in the right hand; where it is partly covered by the poſterior interoſſeus of the ring finger s. Then in Tab. VI. *l* in the right hand, where almoſt the whole of it lies behind the poſterior annularis *q r*. The like appears in Tab. V. *g f* in the right hand.

h The tendon of the proper extenſor of the little finger. i the tendon common to the abductor and ſmall flexor of the little finger. See Fig. 1. *g* R &c.

k The *anterior interoſſeus of the ring finger*, ariſing at l l from that ſide of the metacarpal bone of the ſaid finger, that lies next the meta carpal bone of the

middle finger, and particularly from more than its upper half, below the root of its upper head; except that part of its breath which is next the back of the hand, and from whence the ſmaller head of the poſterior interoſſeus of the middle finger ariſes, m Fig. 9.

m Its tendon, which having received on its inner ſide the tendon of the third lumbricalis, conjoins itſelf with the tendon of the common extenſor belonging to this finger, and being increaſed by a portion received from thence, runs to the third bone o of the ſaid finger.

p q The aponeuroſis, that joins the tendon of the extenſor; produced in its lower part p from the tendon m; and ſpringing in its upper part from the capſule of the joint of this finger with its metacarpal bone.

Add here Fig 1. I &c. and Fig. 7. h &c.

The *ſyſtematic connexion* appears in Tab. VII. y z *a b d* in the right hand; where it is partly covered by the poſterior interoſſeus of the middle finger *e*. Then in Tab. VI. *u* in the right hand; where almoſt the whole lies under the poſterior interoſſeus of the middle finger a b. The like appears in Tab. V. *r q* in the right hand.

r The tendon of the common extenſor belonging to this finger. s the tendon of the poſterior interoſſeus of the ring finger. See Fig. 1. *h*. L. &c.

t The *poſterior interoſſeus of the index*, ariſing at u u from that ſide of the metacarpal bone of the index, that lies next the metacarpal bone of the middle finger; and particularly from more than half its length, juſt below the root of the upper head of that bone; except the margin of that ſide which is next the back of the hand, from whence ariſes the ſmaller head of the anterior interoſſeus of the middle finger, x Fig. 9.

v Its tendon, that conjoins itſelf with the tendon of the extenſor of the index, and being increaſed by a portion received from thence, runs to the third bone x of the index.

y z The aponeuroſis, that joins the tendon of the extenſor indicis; produced in its lower part y by the tendon v; and coming in its upper part from the capſule of the joint of this finger with its metacarpal bone.

Add here Fig. 1. *y* &c. and Fig. 7. e &c.

The *ſyſtematic connexion* appears in Tab. VII. *ſ s v t u* in the right hand; where it is partly covered by the anterior interoſſeus of the middle finger *l*. Then in Tab. VI. q r in the right hand; where the reſt of it is under the anterior interoſſeus of the middle finger i k. The like alſo appears in Tab. V. 1. 2. *Y* in the right hand.

a The tendon of the extenſor indicis. *b* the tendon of the firſt lumbricalis. See Fig. 1. h. *w*. &c.

c The *anterior interoſſeus of the index*, ariſing at *d d* from the anterior ſide of the metacarpal bone of the index; and particularly from more than its upper half, from the root of the upper head of the ſaid metacarpal bone.

e The end of its tendon, inſerted at *f* into the fore part of the upper head of the firſt bone of the index.

Add here Fig. 7. a &c.

The *ſyſtematic connexion* appears in Tab. VII. 2. 3 in the right hand. Then in Tab. VI. 2 in the right hand; where it is partly covered by the abductor indicis 3 z. Likewiſe in Tab. V. 11. in the right hand.

Moreover it appears in Tab. III. e f in the left hand. Then in Tab. II. *W* in the left hand. And in Tab. I. w in the left hand; laterally in Tab. IX. *p* in the left hand.

FIGURE VII.

The internal interoſſei of the hand, viewed on their inner ſide.

a The *anterior interoſſeus of the index*, ariſing at b b b from the fore ſide of the metacarpal bone of the index; and particularly from more than the upper half of its length, juſt below the root of its upper head.

c The tendinous end, inſerted at d into the fore part of the upper head of the firſt bone of the index.

Add here Fig. 6. *c* &c.

The *ſyſtematic connexion* appears in Tab. IV. v w in the right hand; where the greater part of it is covered by the adductor of the thumb s, and the ſhort flexor of it l. Then in Tab. III. z in the right hand; covered alſo by the abductor of the thumb b, and by the ſhort flexor Z, alſo by the firſt lumbricalis c. Then in Tab. II. z in the right hand, where it likewiſe lies under the abductor of thumb y, and the firſt lumbricalis *c*, with the abductor indicis *a b*: and juſt in that manner it appears in Tab. I. a in the right hand.

e The *poſterior interoſſeus of the index*, ariſing at f f from that ſide of the metacarpal bone of the index, that lies next the metacarpal bone of the middle finger; and particularly from more than half of its length, juſt below the root of its upper head.

g Its tendon, which being increaſed by a portion received from the extenſor indicis, runs to the third bone of the index.

The ſaid tendon alſo adheres by thin fibres to the capſule of the joint of this finger with its metacarpal bone, as it paſſes over the ſame towards the palm of the hand. In the ſame manner likewiſe are diſpoſed the anterior interoſſeus of the ring finger, and the anterior interoſſeus of the little finger.

Add here Fig. 6. t &c.

The *ſyſtematic connexion* appears in Tab. IV. x y in the right hand, where the greater part of it is covered by the adductor of the thumb s, and the ſhort flexor l. Then in Tab. III. x y in the right hand; covered alſo by the adductor of the thumb b, and that tendon of the profundus which belongs to the index H. Then in Tab. II. *l* in the right hand, covered alſo by the tendon of the ſublimis P that belongs to the index. Then in Tab. I. v in the right hand, covered by the aponeuroſis of the palmaris longus *c e*.

Moreover in Tab. VIII. i in the left hand.

h The *anterior interoſſeus of the ring finger*, ariſing at i i from that ſide of the metacarpal bone of that finger, which lies next the metacarpal bone of the middle finger; and particularly from more than half its length, juſt below the root of its upper head.

k Its tendon, to which the tendon of the third lumbricalis (z *c d* Fig. 3.) l joins itſelf: and the common tendon formed by them m, being increaſed by a portion received from the tendon of the common extenſor of this finger, runs to its third bone.

Add here Fig. 6. k &c.

The *ſyſtematic connexion* appears in Tab. IV. *e f* in the right hand, partly covered by the third lumbricalis *g*. Then in Tab. III. r in the right hand; where the reſt of it is covered by the third lumbricalis k, and the tendon of the profundus belonging to the middle finger I. Then in Tab. II. *p* in the right hand; where alſo it is covered by the third lumbricalis *g*, and the tendon of the ſublimis N belonging to the index. Then in Tab. I. n in the right hand, covered by the third lumbricalis k, and the aponeuroſis of the palmaris longus *c e*.

Moreover in Tab. VIII. it appears at m in the left hand.

n The *interoſſeus of the little finger*, ariſing at o o from that ſide of the metacarpal bone of the ſaid finger, that lies next the metacarpal bone of the ring finger; and particularly from more than half its length, juſt below the root of its upper head.

p The tendon of this interoſſeus, which joins the tendon of the fourth lumbricalis (*e h i* Fig. 3.) cut off at q: and the common tendon r, which is formed of it, being increaſed by a portion received from the extenſor proper to the little finger, runs to the third bone of the ſaid finger.

Add here Fig. 6. a &c.

The *ſyſtematic connexion* appears in Tab. IV. *m n* in the right hand; where it is partly covered by the fourth lumbricalis *o*. Then in Tab. III. above p in the right hand, where the reſt of it is covered by the fourth lumbricalis n, and tendon of the profundus L, belonging to the adductor of the fourth metacarpal bone U. Then in like manner in Tab. II. *ſ* in the right hand; and in Tab. I. o in the right hand.

Moreover in Tab. VIII. at o it appears in the left hand.

FIGURE VIII.

The bicipital or external interoſſei of the hand, viewed on their inner ſide.

a—f *The anterior interoſſeus of the middle finger.*

a The ſmaller head, which ariſes from the metacarpal bone of the index.

b The thicker head, ariſing at c c from a little more than the upper half of that ſide of the metacarpal bone of the middle finger, that lies next the metacarpal bone of the index.

d The tendon of it that joins the tendon of the ſecond lumbricalis (u x y Fig. 3.) cut off here at e: and the common tendon formed thence f, being increaſed by a portion received from the tendon of the common extenſor belonging to this finger, runs to the third bone of the ſaid finger.

The extremity alſo that lies under the former, uſually inſerts itſelf into the eminence that is juſt beneath the firſt head of the firſt bone. After the ſame manner are diſpoſed the poſterior external interoſſeus of the middle finger, and of the ring finger.

Add here Fig. 9. v x, &c.

The *ſyſtematic connexion* appears in Tab. IV. z in the right hand; where the greater part lies under the poſterior interoſſeus of the index x, the adductor of the thumb s, and the ſhort flexor l, with the ſecond lumbricalis *a*. Then in Tab. III. v in the right hand, placed likewiſe under the poſterior interoſſeus of the index x, the adductor of the thumb b, and the ſecond lumbricalis g. Then in Tab. II. *m* in the right hand; placed under the poſterior interoſſeus indicis *l*, the ſecond lumbricralis *f*, and the tendon of the ſublimis P belonging to the index. Then in Tab. I. m in the right hand; placed under the poſterior interoſſeus of the index v, the ſecond lumbricalis l, and the aponeuroſis of the palmaris longus *c e*.

Moreover in Tab. VIII. near k in the left hand.

g—k The *poſterior interoſſeus of the middle finger.*

g The ſmaller head, which ariſes from the metacarpal bone of the ring finger.

h The thicker head, ariſing at i i from a little more than the upper half of that ſide of the metacarpal bone of the middle finger, that lies next the metacarpal bone of the ring finger.

k The tendon of it, which being increaſed by a portion received from the tendon of the common extenſor belonging to the middle finger, runs to the third bone of the ſaid finger.

Add here Fig. 9. m o &c.

The *ſyſtematic connexion* appears in Tab. IV. *c d* in the right hand; where a great part is covered by the anterior interoſſeus of the ring finger *e*. Then in Tab. III. t u in the right hand; where it is covered by the anterior interoſſeus of the ring finger r, and the tendon of the profundus belonging to the middle finger I. Then in Tab. II. *o* in the right hand; covered by the anterior interoſſeus of the ring finger *p*, and tendon of the ſublimis belonging to the middle finger N. Then in Tab. I. t in the right hand; covered by the anterior interoſſeus of the ring finger n, and the aponeuroſis of the palmaris longus *e*.

Likewiſe in Tab. VIII. l l in the left hand.

l—o The *poſterior interoſſeus of the ring finger.*

l The thinner head, that ariſes from the metacarpal bone of the little finger.

m The thicker head, ariſing from a little more than the upper half of that ſide of the metacarpal bone of the ring finger, that lies next the metacarpal bone of the little finger.

o The tendon of it, which being increaſed by a portion received from the tendon of the common extenſor belonging to the ring finger, runs to the third bone of the ſaid finger.

Add here Fig. 9. a c &c.

The *ſyſtematic connexion* appears in Tab. IV. *i k* in the right hand; where a great part of it is covered by the interoſſeus of the little finger *m*. Then in Tab. III. q in the right hand; covered by the fourth lumbricalis n, and tendon of the profundus K. Then in Tab. II. *r* in the right hand; in like manner covered by the fourth lumbricalis *h*, and tendon of the profundus belonging to the ring finger. Then in Tab. I. r in the right hand; covered alſo by the fourth lumbricalis i.

Alſo in Tab. VIII. n n in the left hand.

FIGURE IX.

The bicipital or external interoſſei of the hand, viewed in their outer ſide.

a—h The *poſterior interoſſeus of the ring finger.*

a The thinner head, arifing at b b from the outer edge of that fide of the metacarpal bone of the little finger, that lies next the metacarpal bone of the ring finger, from the root of its upper head almoft to its lower head.
c The thicker head, arifing at d d from a little more than the upper half of that fide of the metacarpal bone belonging to the ring finger; which lies next the metacarpal bone of the little finger.
e Its tendon, that joins itfelf with the tendon f of the common extenfor belonging to the ring finger, and being increafed by a portion received from thence, runs to the third bone g of the faid finger.
h i The aponeurofis, that joins to the tendon of the common extenfor belonging to the ring finger; produced in its lower part h from the tendon e; in its upper part i fpringing from the capfule of the joint of this finger with its metacarpal bone.
Add here Fig. 1. L &c. and Fig. 8. l m &c.
The *fyftematic connexion* appears in Tab. VI. *q r s v t* in the right hand. Then in Tab. V. *m m n o p l* in the right hand; where the reft of it lies under the tendons of the common extenfor of the fingers f f, &c. and under the tendon of the extenfor proper to the little finger c.
Moreover in Tab. VII. s t &c. in the right hand. Alfo in Tab. III. i in the left hand: and in Tab. II. 2 in the left hand.
k The tendon, belonging to the ring finger from the common extenfor. l the tendon common to the anterior interoffeus of the ring finger and third lumbricalis. See Fig. 1. *h* I. &c.
m—t The *poflerior interoffeus of the middle finger.*
m The thinner head, arifing from the outer edge of that fide of the metacarpal bone of the ring finger, that lies next the metacarpal bone of the middle finger; from the root of its upper head almoft to the lower head of the faid bone.
o The thicker head arifing at p p from a little more than the upper half of that fide of the metacarpal bone of the middle finger, that lies next the metacarpal bone of the ring finger.
q The tendon of it that joins with the tendon r of the common extenfor r belonging to the middle finger, and being increafed by a portion received from thence, runs to the third bone s of the middle finger.
t u The aponeurofis that joins the tendon of the common extenfor belonging to the middle finger, produced in its lower part t from the tendon q; coming its upper part at u from the capfule of the joint of this finger, with its metacarpal bone.
Add here Fig. 1. E, &c. and Fig. 8. g h, &c.
The *fyftematic connexion* appears in Tab. VI. a b c f g h in the right hand. Then in Tab. V. *x y z C w* in the right hand, where the reft lies under the tendon of the common extenfor of the fingers f n o p.
Likewife in Tab. VII. *e f*, &c. in the right hand. Alfo in Tab. III. h in the left hand. And in Tab. II. 1 in the left hand.
v—*e* The *anterior interoffeus of the middle finger.*
v The thicker head, arifing at w w from a little more than the upper half of that fide of the metacarpal bone of the middle finger, that lies next the metacarpal bone of the index.
x The thinner head, arifing at y y from the outer edge of that fide of the metacarpal bone of the index, that lies next the metacarpal bone of the middle finger; from the root of its upper head almoft to its lower head.
z Its tendon, which being received by the inner part of the tendon of the fecond lumbricalis, joins itfelf at *a* with the tendon of the common extenfor belonging to the middle finger; and being increafed by a portion received from thence, it runs to the third bone *b* of the middle finger.
c The common end, in which the tendons s, *b* are conjoined, inferted at *d* into the third bone.
e f The aponeurofis, that joins the tendon of the common extenfor belonging to the middle finger; produced in its lower part *e* from the tendon z, in its upper part *f* from the capfule of the joint of this finger with its metacarpal bone.
Add here Fig. 1. C &c. and Fig. 8. a b &c.
The *fyftematic connexion* appears in Tab. VI. i i k k l m n p in the right hand; where it lies partly under the tendon of the indicator mufcle. Then in Tab. V. *H H H L X P S D* in the right hand; where in part alfo it lies under the tendon t of the indicator, and likewife under the tendon r of the common extenfor, and its aponeurofis s.
Moreover in Tab. VII. at *l m* &c. in the right hand. And in Tab. III. g in the left hand: and Tab. II. *O* in the left hand.
g The tendon of the common extenfor belonging to the middle finger. See Fig. 1. *i l.*

MUSCLES OF THE LITTLE FINGER.

Add here the *extenfor proper to the little finger*, Fig. 1. *a* &c.

FIGURE X.

The fmall flexor of the little finger.

a Its origin from the outer part of the carpal ligament, and at b from the middle of the extremity of the crooked procefs of the cuneiform bone of the wrift.
c The tendon, in which it ends; and by which, joining the tendon of the abductor, it forms the common tendon d: and that conjoins itfelf with the tendon of the extenfor proper to the little finger; and being increafed by a portion received from thence, it runs to the third bone of this finger. See Fig. 1. R *u* S T U.
Add here Fig. 1. R &c. and Fig. 6. i.
The *fyftematic connexion* appears in Tab. II. *t u w* in the right hand. Then in Tab. I. f h p in the right hand; where it is partly covered by the palmaris brevis g g, and partly by the aponeurofis of the palmaris longus *c.*
Moreover in Tab. VI. *f* in the left hand. Alfo in Tab. V. *x* in the left hand. And in Tab. IX. i in the right hand.

FIGURE XI.

The abductor of the little finger.

a Its origin from the inner and back part of the round protuberance in the pifiform bone; and from the adjacent inner ligament of the wrift at b.
c One of the tendons, in which it ends; inferted at d into the back part of the upper head of the firft bone of the little finger, juft beneath its upper edge.
e The other tendon, that joins itfelf to the tendon of the fmall flexor, here cut off at f: and the common tendon thence produced, immediately inferts itfelf beneath the faid tendinous end d, into the fame head of the bone where it is unequally protuberant: then at g (which is d Fig. 10.) it joins the tendon of the extenfor proper to the little finger.
The aponeurofis, which this tendon gives to the extenfor tendon of the little finger, fee in Tab. V. *a* in the right hand: and in Tab. VI. *k* in the right hand: and Tab. VII. l in the right hand.
Add here Fig. 1. R &c. and Fig. 6. i.
The *fyftematic connexion* appears in Tab. II. *y z* in the right hand; partly covered by the fmall flexor *t u w*. Then in Tab. I. c in the right hand; in part alfo covered by the fmall flexor h p, and in part by the palmaris brevis g g.
Moreover in Tab. VI. *h* in the left hand: and *f* in the right hand. Alfo in Tab. V. *t* in the left hand: and *b* in the right. And in Tab. IX. k in the right hand.

MUSCLES OF THE INDEX OR FORE-FINGER.

FIGURE XII.

The indicator.

a The tendinous beginning, arifing at b b near the back part of the extenfor major of the thumb, from the outer fpine of the ulna, beginning near the middle of that bone; afterwards, below the origin of the faid extenfor major of the thumb from the ulna, it arifes from the interoffeus ligament of the cubit near the ulna.
c The tendon in which it ends, and which runs together with the common extenfor of the fingers under the outer armillary ligament of the wrift (16 Tab. V. in the right hand) through the common finus.
d The conjunction of this tendon, with the tendon of the common extenfor of the fingers belonging to the index e, here cut off; and with that it forms the common tendon f.
Add here Fig. 1. V h *k l m n o*, &c.
The *fyftematic connexion* appears in Tab. VI. f g h in the arm. Then in Tab. V. t in the right hand, where part of it is covered by the tendon r of the common extenfor of the fingers: and in the cubit it lies under the faid common extenfor d, &c. and under the extenfor proper to the little finger a, with the ulnaris externus w.
Moreover in Tab. II. *Y Y* in the left hand: and in Tab. I. it appears at u u in the left hand. Alfo in Tab. IX. u in the left hand.
g The tendon of the poflerior interoffeus of the index. See *y* Fig. 1.
h The tendon of the firft lumbricalis. See *w* Fig. 1.

FIGURE XIII.

The abductor indicis, externally.

a The tendinous beginning, by which it arifes at b from the back of the larger multangular bone.
c Its origin from the upper part of the edge of the metacarpal bone of the thumb, that lies next to the index.
d The portion that arifes from the inner and upper part of the metacarpal bone of the index.
e The aponeurofis which it conjoins with the tendon of the firft lumbricalis, and with the common tendon of the extenfors of the index, h Fig. 1: from whence it is here cut off at f.
Add here Fig. 14.
The *fyftematic connexion* appears in Tab. VI. 3 z in the right hand, where it lies partly under the tendon c of the extenfor major of the thumb. And in Tab. V. 12. 5 in the right hand; covered in like manner by the tendon 13 of the extenfor major of the thumb.
Moreover in Tab. II. it appears at *S* in the left hand: and in Tab. I. at x in the left hand: alfo at Tab. IX. at *q* in the left hand.

FIGURE XIV.

The abductor of the index, in its inner fide.

a Part of its tendinous beginning.
b The tendinous end, by which it is inferted at c into the upper head of the firft bone of the index.
Add here Fig. 13.
The *fyftematic connexion* appears in Tab. II. *a b* in the right hand; where the greater part of it is covered by the adductor of the thumb y, and the fhort flexor x, with the firft lumbricalis *c*. And in Tab. I. b in the right hand; covered in the fame manner by the adductor of the thumb *Y*, and the fhort flexor *W*, with the firft lumbricalis *O* w.

MUSCLES OF THE THUMB.

FIGURE XV.

The opponent of the thumb.

a Its origin from the anterior of thofe eminences in the larger multangular bone, that help to form the finus, through which the tendon of the radialis internus paffes to the hand; and at b b b from the carpal ligament, with a tendinous beginning.
c The tendinous portion of its extremity.
d d Its infertion at the inner fide of the metacarpal bone of the thumb, at its lower head. It is alfo inferted along the whole anterior edge of that fide of the bone.

e The impreſſion formed by the ſhort abductor of the thumb, and by its ſecond ſhort abductor.

The *ſyſtematic connexion* appears in Tab. II. q &c. in the right hand; in part covered by the ſecond ſhort abductor of the thumb u, and the tendon f of the leſs extenſor of the thumb. Then in Tab. I. X in the right hand; in a great meaſure covered by the ſhort abductor of the thumb Y; and a ſmall part by the tendon d of the leſs extenſor of the thumb.

Moreover in Tab. VI. *r* in the left hand. And in Tab. II. *C* in the left hand. Alſo in Tab. I. z in the left hand. And in Tab. IX. *l* in the left hand.

FIGURE XVI.

The abductor brevis of the thumb.

a a Its origin from the inner carpal ligament.

b Its tendinous end, of which the part c is inſerted into the inner and fore part of the upper head of the firſt bone of the thumb.

d A thin tendinous portion, that climbs on the back of the thumb, and joins with the fore part of the tendons of the extenſors of the thumb, and is continued over the ſurface of thoſe tendons to a like aponeuroſis of the ſhort flexor of the thumb.

e The portion, which the tendon of the upper part of the long abductor of the thumb ſends to the ſhort abductor. See Fig. 19. e: from whence it is here cut off.

The *ſyſtematic connexion* appears in Tab. I. Y Z *C* in the right hand. And in Tab. II. k in the right hand.

Moreover in Tab. V. *b k* in the left hand. And in Tab. IX. *i k* in the left hand; and a b in the right hand.

f The tendon of the leſs extenſor of the thumb here cut off.

g The common tendon of the extenſors of the thnmb.

FIGURE XVII.

The ſecond ſhort abductor of the thumb.

a Its origin, from the lower and outer part of the inner carpal ligament.

b Its tendinous end, inſerted at c into the inner and fore part of the upper head of the firſt bone of the thumb.

The *ſyſtematic connexion* appears in Tab. II. u &c. in the right hand; at its end covered by the aponeuroſis of the ſhort abductor of the thumb k. Then in Tab. I. *L* in the right hand; where it is alſo covered by the ſhort abductor Y *C*, and the aponeuroſis of the palmaris longus *c*.

Moreover in Tab. VI. it appears at *t* in the left hand. And in Tab. V. *l* in the left hand. Alſo in Tab. IX. c in the right hand.

FIGURE XVIII.

The long abductor of the thumb, in its outer part.

a a The tendinous beginning, ariſing at b b from the ſpine of the ulna, juſt above the middle of that bone, from its outer part, near the lower portion of the ſupinator brevis.

d The part that ariſes at e e from the outer ſide of the radius, near the lower part of the ſupinator brevis, oppoſite its origin from the ulna.

Alſo beneath it ariſes from the outer part of the interoſſeus ligament, that is ſeated betwixt the radius and ulna, and between the two foregoing originations of it from the radius and ulna.

f The tendinous portion of the ſaid intermediate part.

g The tendon of its upper part.

h The tendon of its lower part, here cut off at i.

The tendons ſlide down thro' the anterior ſinus that is in the lower head of the radius, under the ligament, 20 in the right hand of Tab. V. and in Tab. IX. *g* in the left hand.

Add here Fig. 19.

The *ſyſtematic connexion* appears in Tab. VI. *L—W* in the arm; where it is covered by the ſhorter radialis externus V, the ſupinator brevis *D*, the extenſor major of the thumb a, and leſs extenſor *Y O*. Then in Tab. V. 21—23 in the cubit; covered by the ſhorter radialis externus H, the common extenſor of the fingers d, the proper extenſor of the little finger a, and the leſs extenſor of the thumb 24, 25.

Moreover in Tab. II. it appears in the left cubit at Z a b. And in Tab. I. *w x y z* b b in the left arm. And in Tab. IX. x y y z z in the left arm and hand.

FIGURE XIX.

The long abductor of the thumb, in its inner part.

a Its inner part, that lies next the ſupinator longus and radialis externus.

b Its upper part. c the tendon, in which it ends; of which the part d is inſerted into the inner ſide of the larger multangular bone, near the thumb; and the portion e joins the ſhort abductor of the thumb, here cut off, V. e Fig. 16.

f Its lower part. g the tendon, in which it ends; inſerted at h into the tubercle, that is in the inner and fore-part of the upper head of the metacarpal bone of the thumb, above its internal edge.

The tendons ſlide down thro' the anterior ſinus in the lower head of the radius, under the ligament to be ſeen at *u* in Tab. I. in the arm.

Add here Fig. 18.

The *ſyſtematic connexion* appears in Tab. II. a b c d in the right cubit; where its end is covered by the opponent of the thumb q in the hand. Then in Tab. I. *x z z* a b b in the right arm; where likewiſe its end lies under the opponent X, in hand.

Moreover it appears in Tab. V. *g* in the left hand.

FIGURE XX.

The ſhort flexor of the thumb.

a Its origin, from the inner and lower part of the leſs multangular bone, from the os magnum vel capitatum b, and from the cuneiform bone c. It ariſes alſo from the inner eminence of the larger multangular bone. And below its origination from thoſe bones, it likewiſe ſprings from the adjacent heads of the metacarpal bones, belonging to the index and middle finger, and often from thoſe of the ring finger and thumb.

d One of its tails, inſerted by the tendinous end e into the upper part of that ſeſamoide bone f, which is placed outermoſt or fartheſt from the index, at the joint of the thumb with its metacarpal bone.

g The other tail, inſerted by the tendinous end h into the ſeſamoide bone i, that is neareſt the index; into the upper part of it, and that ſide which is neareſt the index: and a little below that, it is inſerted at k into the neareſt lateral part of the upper head of the firſt bone of the thumb.

The aponeuroſis, produced from the tail which is neareſt the index, and which joins the aponeuroſis inveſting the capſule of the joint of the thumb with its metacarpal bone, and with that adheres to the common end of the extenſor tendons of the thumb, may be ſeen in Tab. IV. r in the left hand.

The *ſyſtematic connexion* appears in Tab. IV. l—q in the right hand; where a ſmall part is covered by the adductor of the thumb s. Then in Tab. III. Z Z in the right hand; where it is covered by the adductor of the thumb b, and by the tendon A of the long flexor of the thumb, and by the firſt lumbricalis c; and at its origin it lies hid behind the inner armillary ligament of the wriſt N. Then in Tab. II. x in the right hand; covered by the adductor of the thumb y, by the tendon of the long flexor of the thumb V, with the firſt lumbricalis *c*, the ſhort abductor of the thumb u, and the opponent q. So alſo in Tab. I. at *W* in the right hand, it appears covered with the ſame muſcles.

Moreover it appears in Tab. VIII. *Y*—e in the left hand. Alſo in Tab. VII. *W Y* in the left hand. Tab. VI. *x* in the left hand. Tab. V. *o* in the left hand. And Tab. IX. d in the right hand.

In its outer part it appears in Tab. VIII. *Y* f in the right hand. In Tab. VII. 4. 5 in the right hand. In Tab. VI. 6. 5 in the right hand. Tab. V. between 27 and 29 in the right hand. Then in Tab. IV. l r in the left hand. Tab. III. a b in the left hand. Tab. II. *H L* in the left hand. Alſo in Tab. I. D in the left hand. And in Tab. IX. *m* in the left hand.

FIGURE XXI.

The long flexor of the thumb.

a a The firſt origin of it from the radius; whoſe inner ſide it occupies, from near the tubercle into which the biceps of the arm is inſerted, almoſt down to the pronator quadratus. And it alſo ariſes from the interoſſeus ligament that is betwixt the radius and ulna.

b The tendinous part of its origin.

c The portion that joins this muſcle, ariſing by a ſlender tendon d, from the greater condyle of the humerus e, and is not often to be met with. f the tendon in which the ſaid portion ends; joins the fleſhy part of the flexor, and forms the firſt beginning of its tendon g.

The tendon paſſes thro' the inner ſinus of the carpus under the inner ligament, which ſee in Tab. III. N in the right hand.

h The tendon paſſing betwixt the ſeſamoide bones of the thumb.

i Its courſe along the thumb and its metacarpal bone, where it is in a manner ſplit longitudinally.

k Its inſertion nearly into the middle of the rough eminence, that is in the poſterior ſide of the laſt bone of the thumb.

The ligament, that confines it in paſſing along the firſt bone of the thumb. See in Tab. I. *S* in the right hand.

The *ſyſtematic connexion* appears in Tab. III. *P*—B in the fore-arm and hand, where a ſmall part lies hid behind the pronator teres *L*, and the ſhorter radialis externus *x*; but the acceſſory portion at its beginning lies behind the brachialis internus *n p*. Then in Tab. II. S T V W in the cubit, &c; where it lies behind the ſublimis C O, the ſupinator longus X, and the ſhort abductor of the thumb u in the right hand. Then in Tab. I. *q r* in the arm, and *X X P* in the right hand; where it lies under the ſublimis *f l*, the ſupinator longus *S*, the radialis internus *O* in the arm, and the ſhort abductor of the thumb *L* in the right hand.

Moreover it appears in the left cubit and hand of Tab. VII. at X X Y. In Tab. VI. *C D* in the left hand. And in Tab. V. *n n* in the left hand. Alſo in Tab IX. f f in the left arm, and f f in the right hand.

FIGURE XXII.

The larger extenſor of the thumb.

a a Its origin from the outer part of the ulna, almoſt in the middle of it longitudinally. And at b it ariſes beneath from the ligament that is extended betwixt the radius and ulna.

c The tendinous part of its beginning.

d The tendon, in which it ends; and which runs down thro' the ſmall ſinus of the radius, that is juſt behind the ſinus, thro' which paſs the tendons of the radiales externi: and it runs under the outer armillary ligament of the wriſt, which ſee in Tab. V. 16 in the right hand.

e The tendon of the leſs extenſor of the thumb, here cut off, ſee Fig. 23. c.

f The common end, in which the tendons of the larger and leſs extenſor of the thumb unite; inſerted at g into the oblong tranſverſe protuberance, that ſtands out from the upper and fore part of the laſt bone of the thumb.

The *ſyſtematic connexion* appears in Tab. VI. a b c d e in the arm; where it lies under the anconæus Y, and the indicator f g h. Then in Tab. V. 13. 26 in the right hand, where it lies under the common extenſor of the fingers d in the cubit, under the proper extenſor of the little finger a, and the ulnaris externus W.

Moreover in Tab. II. g g h in the left cubit. And in Tab. I. y A in the left hand. And in Tab. IX. *c c d* in the left arm and hand.

h The aponeurosis, that joins itself to the tendon of the common extensors of the thumb, here cut off. Part of it incompasses the capsule of the joint of this thumb with its metacarpal bone, connected to the said capsule: part of it springs from the posterior tail of the short flexor of the thumb. See 4 and 5 in the left hand of Tab. VI.

The aponeurosis, which the common tendon receives on the other side from the short abductor of the hand, see in Fig. 16. d.

FIGURE XXIII.

The less extensor of the thumb.

a The tendinous part of its beginning, arising at b from the outer part of the spine of the ulna, to which is connected the ligament that lies betwixt the bones of the cubit. And below that origin it arises from the foresaid ligament.

c The tendon, in which it ends; and which here passes thro' the anterior sinus that is in the lower head of the radius, and under the ligament 20 in Tab. V. in the right hand, and Tab. I. *u* in the arm, and Tab. IX. *g* in the left hand.

d The tendon of the larger extensor of the thumb, here cut off; d Fig. 22.

e The common end, in which the tendons of the larger and less extensor of the thumb unite; inserted at f into the oblong transverse protuberance, that stands out in the upper and fore part of the last bone of the thumb.

The *systematic connexion* appears in Tab. VI. *Y O* d in the arm; where at its origin it lies under the extensor major of the thumb a c. Then in Tab. V. 24. 25. 26; in part covered by the common extensor of the fingers d, and the extensor proper to the little finger a.

Moreover in Tab. II. e f in the cubit. And in Tab. I. c d in the arms. And in Tab. IX. *a b* in the left arm and hand.

g The same aponeurosis, that is marked h, Fig. 22.

FIGURE XXIV.

The adductor of the thumb.

a Its origin from the fore part of the upper head of the metacarpal bone of the ring finger, near the metacarpal bone of the middle finger; and afterwards at b b from the inner side of the metacarpal bone of that middle finger.

c The tendinous end, inserted at d into that part of the upper head of the first bone of the thumb that lies next the index.

The *systematic connexion* appears in Tab. IV. s &c. in the right hand; in some measure covered by the short flexor of the thumb l, and posterior interosseus of the middle finger *c*. Then in Tab. III. b b in the right hand; covered by the short flexor of the thumb Z, the 1st and 2d lumbricalis c, g, with the tendon of the profundus H and I. Then in Tab. II. y in the right hand, where as before it is covered by the short flexor of the thumb x, the first lumbricalis *c*, the second lumbricalis *f*, and the tendons of the profundus that belong to the index and middle finger, and the tendon of the sublimis P that belongs to the index. Also in Tab. I. *Y* in the right hand, covered by the same muscles.

Moreover it appears in Tab. VIII. g h in the left hand. Tab. VII. *O* in the left hand: and in Tab. VI. *z* in the left hand. Tab. V. *q* in the left hand. And in Tab. IX. e in the right hand.

In its fore part it appears in Tab. VIII. g g h in the right hand. Tab. VII. 6. 7 in the right hand. Tab. VI. 7. 8 in the right hand. Tab. V. 29. 30 in the right hand. Then in Tab. IV. s u in the left hand. In Tab. III. c d in the left hand. In Tab. II. *X P* in the left hand. In Tab. I. F G in the left hand. And in Tab. IX. *n o* in the left hand.

Muscles of the metacarpus.

FIGURE XXV.

The adductor of the metacarpal bone of the little finger.

a Its origin from the posterior and almost extreme part of the crooked process of the cuneiform bone of the wrist, a little below its middle: and at b from the adjacent outer part of the inner carpal ligament, below the said process.

c c In these parts it is inserted into the metacarpal bone of the little finger, near its head: and betwixt them through its whole length, namely, into the posterior and inner part of that bone.

The *systematic connexion* appears in Tab. III. U &c. in the right hand. Then in Tab. II. *x x* in the right hand, covered by the abductor of the little finger *y*, and the small flexor *t*. Then in Tab I. f in the right hand, covered by the abductor of the little finger c, by the small flexor h, the palmaris brevis g g, and the aponeurosis of the palmaris longus *c*.

Moreover in Tab. VII. it appears at *X P S* in the left hand; and a in the right hand. Also in Tab. IX. l in the right hand.

Muscles of the palm.

FIGURE XXVI.

The palmaris longus and brevis.

a—o The *palmaris longus*.

b The tendinous beginning, arising from the end of the inner part of the posterior condyle of the os humeri; which beginning afterwards runs thro' it at c: but belongs to the common tendinous head, by which it arises with the other muscles from this condyle; and from which it is separated in the same manner with that of the radialis internus Tab. XIX. Fig. 9. a.

d The tendon, in which it ends.

c The aponeurosis, in which the said tendon expands; and which partly arises from the inner ligament of the wrist. The said aponeurosis is first slightly distinguished into the four portions f. g. h. i, going to the fingers; which are afterwards so far divided, that they only cohere by the transverse tendinous threads k k k.

l. l: l. l: l. l: l. l The bifurcated extremity, in which each portion ends upon the finger to which it belongs; and which are inserted into the transverse ligament that is at the roots of the fingers, as well into the parts m m m m that lie betwixt the two horns of each portion, as into the parts n. n. n that are immediately covered by the portions themselves betwixt those horns. And at the upper part of the said ligament, they are inserted by a small portion into the middle of the inner side of the metacarpal bones.

o The portion cut off, which it gives to the short abductor of the thumb.

The *systematic connexion* appears in Tab. I. *a—e* in the arm; where at its origin it lies under the pronator teres *W*. Also in Tab. V. L in the cubit, and *r* in the left hand. And in Tab. IX. *n o* in the right arm.

p p The *palmaris brevis*, unequally divided into portions.

q q Its detachment from the beginning of the aponeurosis of the palmaris longus. It also goes off from the outer part of the inner carpal ligament near the thumb.

r r The extremities, which are inserted into the tendinous covering of the hand that lies next to the common integuments, and belonging to the fourth metacarpal bone.

The *systematic connexion* appears in Tab. I. g g in the right hand; where (as here) part of its origin lies under the aponeurosis of the palmaris longus *c*.

Moreover in Tab. V. it appears at *f f* in the left hand. And in Tab. IX. h in the right hand.

THE

Twenty-first Anatomical Table

OF THE

HUMAN MUSCLES

EXPLAINED.

Muſcles of the thigh.

Add here Tab. XXII. Fig. 1. 2. 3. 4. 5. 6. 7. 8. And the *abductor facialis femoris*, Fig. 8. Tab. XXIII.

FIGURE I.

The gluteus magnus.

The fleſh of this muſcle is outwardly collected into ſmall bundles looſely cohering together.

a a Its origin from the os ilium at the outer edge of the back part of its ſpine, by which that bone is extended backwards over the os ſacrum. It ariſes with a tendinous beginning.

It alſo adheres ſo firmly to the ligamentum ſacro-iſchiaticum, and to the ligament that goes from the os ſacrum, to the ſpine or criſta of the os ilium, as alſo to the tendinous vagina that covers it outwardly, that it ſeems to ariſe from each of them. Its ſaid origin (a a) is alſo continued to the tendinous origin of the latiſſimus dorſi, and common heads of the longiſſimus dorſi and ſacrolumbalis. See Tab. V. *d d* in the buttock.

b The place where it ariſes from the outer edge of the os ſacrum.

c Its origin from the firſt protuberance, at the ſide of the opening in which the canal of the ſpina dorſi, including the ſpinal medulla, terminates.

d Its origin from the juncture of the oblique proceſſes of the os ſacrum and coccygis.

e Its origin from the ſide of the os coccygis.

f The tendon, in which it ends; and which is inſerted into the protuberance of the thigh-bone, that is extended along its back part downwards from the root of the great trochanter; and it principally inſerts itſelf into the upper part of this eminence, where it is generally the moſt rough and protuberant. It alſo coheres with the tendinous faſchia or covering that binds together the adjacent muſcles of the thigh.

g The place where it coheres to the vaſtus externus.

The *ſyſtematic connexion* appears in Tab. V. *c* in the buttock. Alſo in Tab. IX. w x y in the hip. And in Tab. I. A in the thigh.

FIGURE II.

The middle gluteus, in its back part.

a a a Its origin from the whole extent of the back of the os ilium, from near its ſpine.

b Its tendinous extremity, inſerted obliquely at c c into the trochanter major, from the tip to its root.

d d The impreſſion made in it by the gluteus magnus.

Add here Fig. 3.

The *ſyſtematic connexion* appears in Tab. VI. i &c. in the lower part of the trunk. Then in Tab. V. Y in the buttock, where the remaining part of it is covered by the gluteus magnus w.

FIGURE III.

The middle gluteus, in its fore part.

a Its outer part. b Its inner part.

c c Its origin from the ſpine of the ilium.

d The tendinous portion, by which the tendinous end begins internally.

Add here Fig. 2.

The *ſyſtematic connexion* appears in Tab. II. s in the trunk; where the reſt of it is covered by the gluteus minor u. Then in Tab. I. K in the thigh; where it lies partly behind the tenſor or abductor faſchialis femoris M.

FIGURE IV.

The gluteus minor, in its back part.

a a a The firſt of its origination from the back of the os ilium, from all that part of it which lies betwixt the origins of the middle gluteus and beginning of the iſchium, and from the poſterior edge of the upper part of the iſchium itſelf.

b The tendinous portion, that begins outwardly from its tendinous inſertion.

Add here Fig. 5.

The *ſyſtematic connexion* appears in Tab. VII. z &c. in the hip. In Tab. VI. it lies under the gluteus medius i in the lower part of the trunk, and the pyriformis n.

FIGURE V.

The gluteus minor, in its fore part.

a a Its origin from the os ilium.

b Its outer part. c Its inner part.

d Its tendinous end that terminates in that fore part of the trochanter major that is near its outer ſide from the root to its tip. See Tab. III. *r* in the trunk.

Add here Fig. 4.

The *ſyſtematic connexion* appears in Tab. III. *o—ſ* in the trunk, where it lies under the iliacus internus *s*. Then in Tab. II. u in the trunk; placed under the iliacus internus y in the thigh, and the rectus x. In Tab. I. it lies under the abductor faſchialis femoris M in the thigh.

FIGURE VI.

The pyriformis, in its back part.

a Its origin from the outer part of the poſterior and lower edge of the os ilium, near the os ſacrum.

b The tendon, in which it ends: for it is inſerted into the inner and middle part of the mount of the trochanter major.

Add here Fig. 7.

The *ſyſtematic connexion* appears in Tab. VI. n in the lower part of the trunk; where it is partly covered by the gluteus medius i, in part by the upper of the gemini q, and in part lies behind the os ſacrum. In Tab. V. it lies under the gluteus magnus *c* in the buttock.

FIGURE VII.

The pyriformis, in its fore part.

a b. c d. e f Three portions, by which it ariſes from the fore part of the os ſacrum; being tendinous at their beginning b d f.

g The uppermoſt of them, ariſing from the fore part of the body of the ſecond vertebra of the os ſacrum, juſt above its ſecond foramen.

h The middle portion, from the fore part of the proceſs that lies betwixt the ſecond and third foramen.

i The lower portion, from the fore part of the proceſs that is betwixt the third and fourth foramen.

k The place where the muſcle is cut off.

Add here Fig. 6.

FIGURE VIII.

The quadratus femoris, in its back part.

a The tendinous part of its beginning.

b b The extremity, inſerted into the oblong eminence of the thigh-bone, that ſtands out partly from the poſterior ſide of the root of the trochanter major, and partly below the ſame.

Add here Fig. 9.

The *ſyſtematic connexion* appears in Tab. VI. z in the lower part of the trunk; in part ſeated under the lower of the gemini s, and hid behind the biceps of the thigh *i k*, with the ſemimembranoſus. And what there appears naked, in Tab. V. lies under the gluteus magnus *c* in the buttock.

FIGURE IX.

The quadratus femoris, anteriorly.

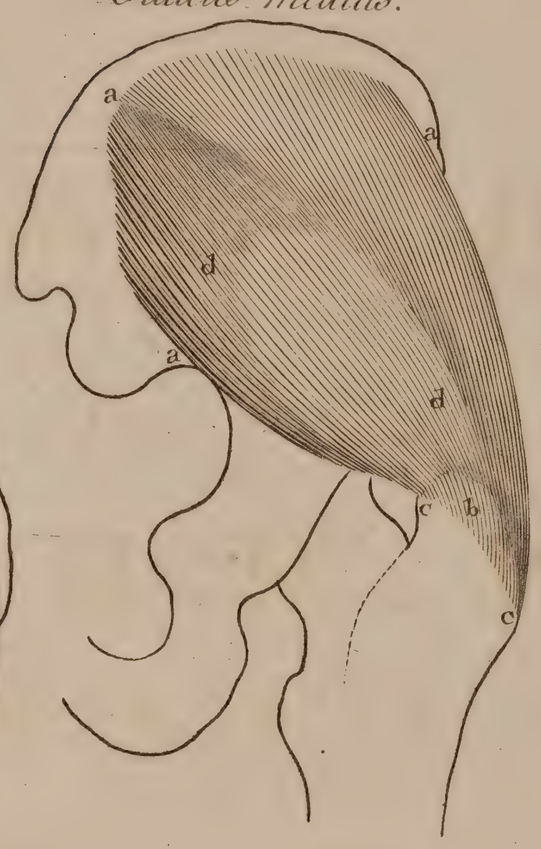
a a Its origin from the outer edge of the tuberculum iſchii.

Add here Fig. 8.

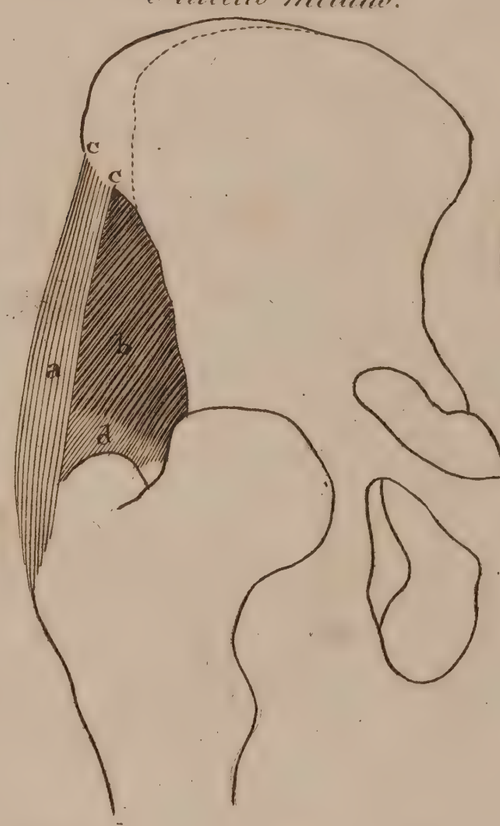
TAB. XXI.

I.
Glutæus Magnus.

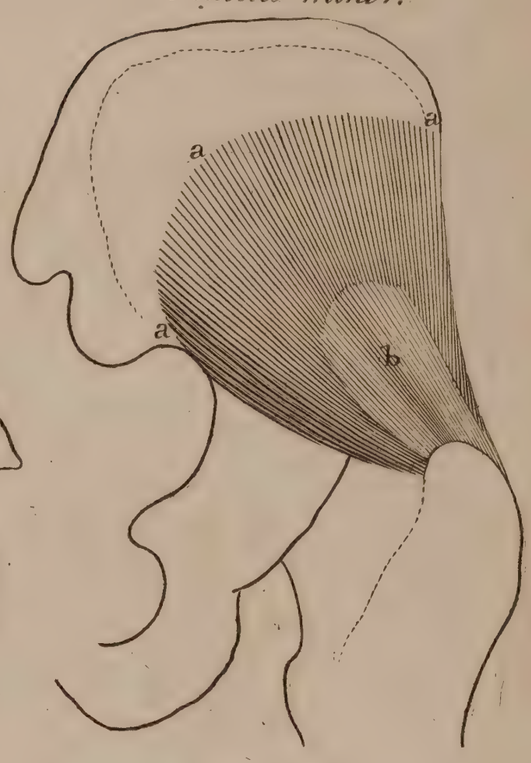
II.
Glutæus medius.



III.
Glutæus medius.

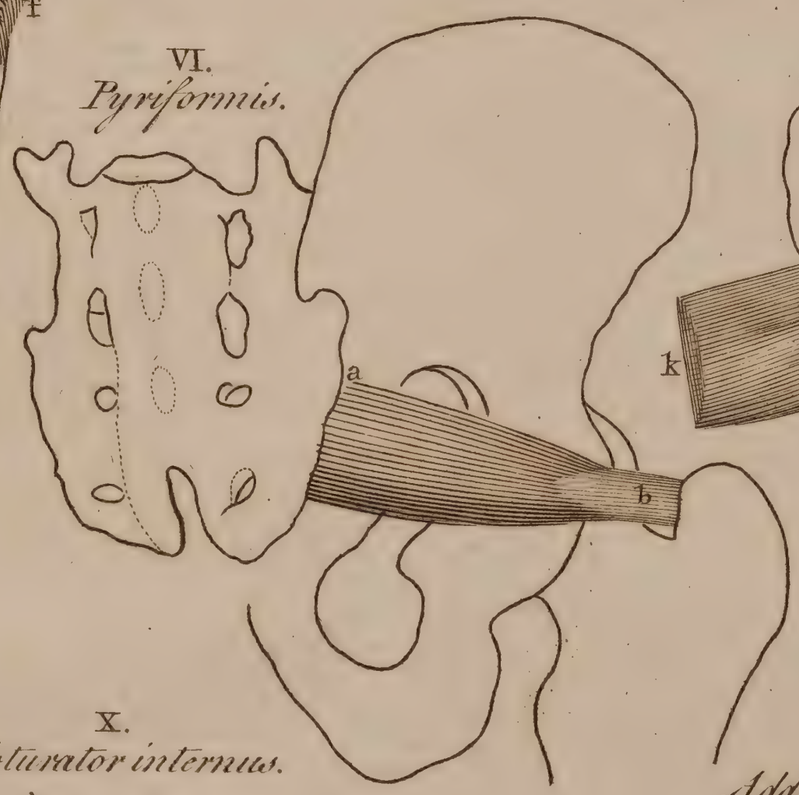


IV.
Glutæus minor.



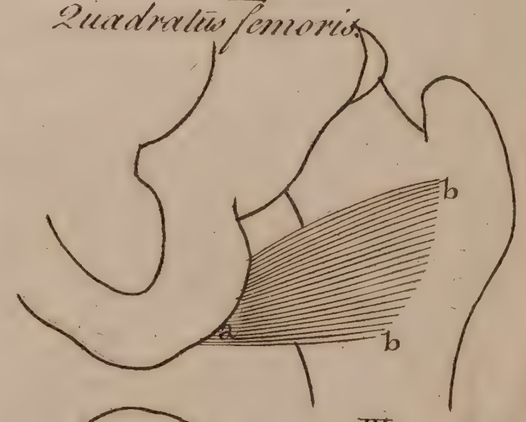
V.
Glutæus minor.

VI.
Pyriformis.

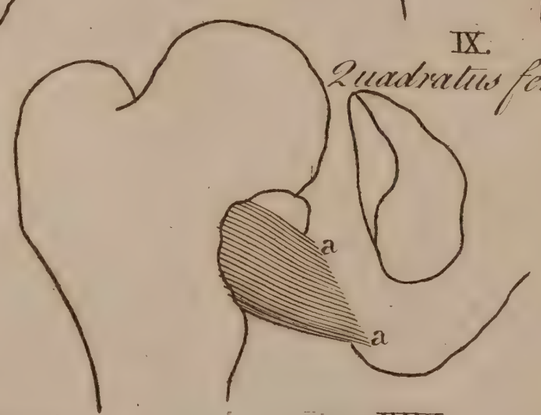


VII.
Pyriformis.

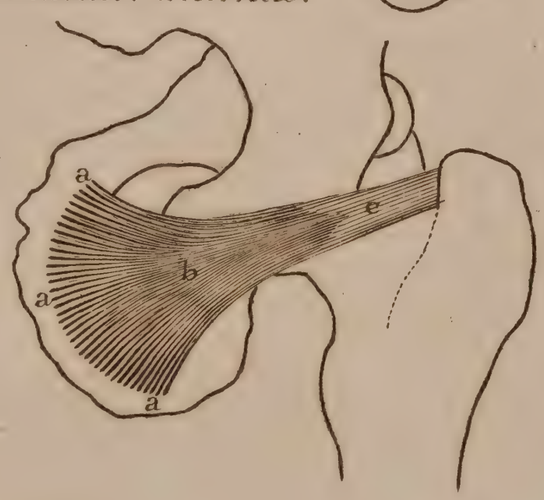
VIII.
Quadratus femoris.



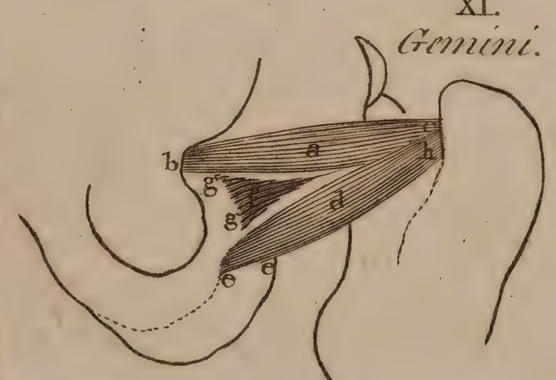
IX.
Quadratus femoris.



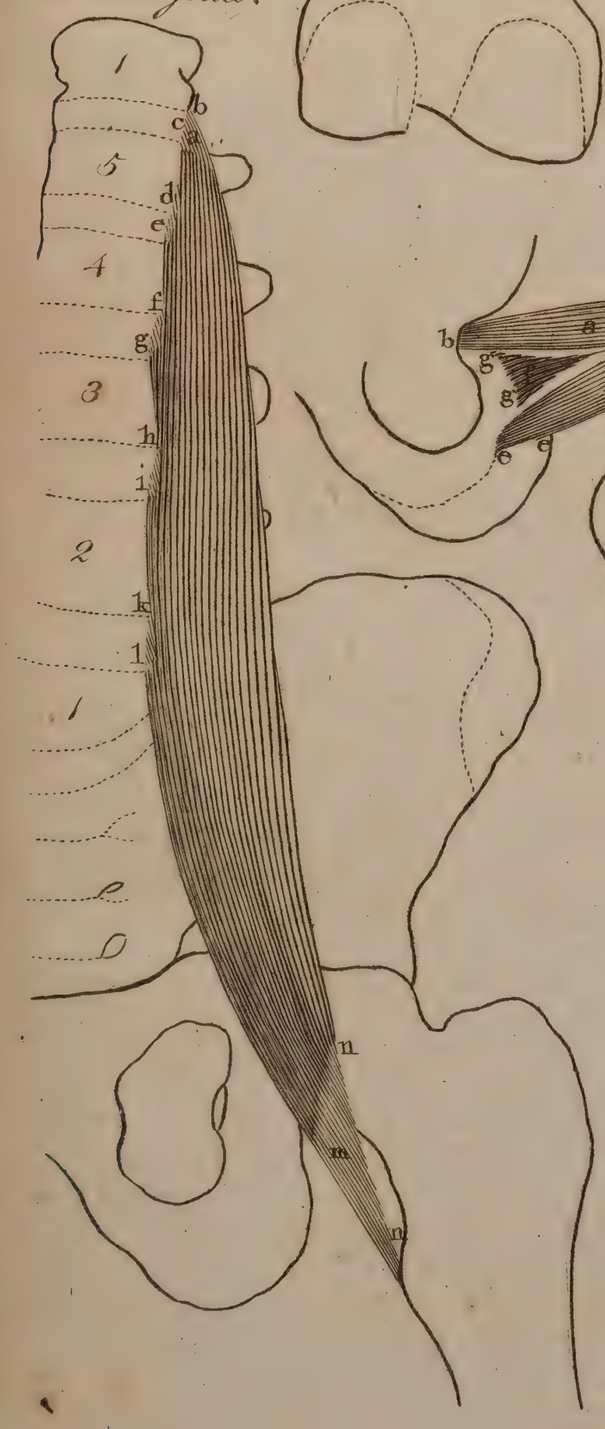
X.
Obturator internus.



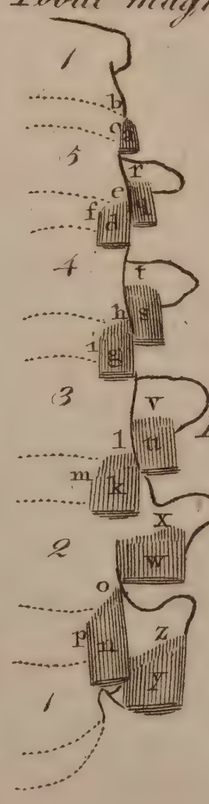
XI.
Gemini.



XII.
Psoas magnus.



XIII.
Psoae magni.

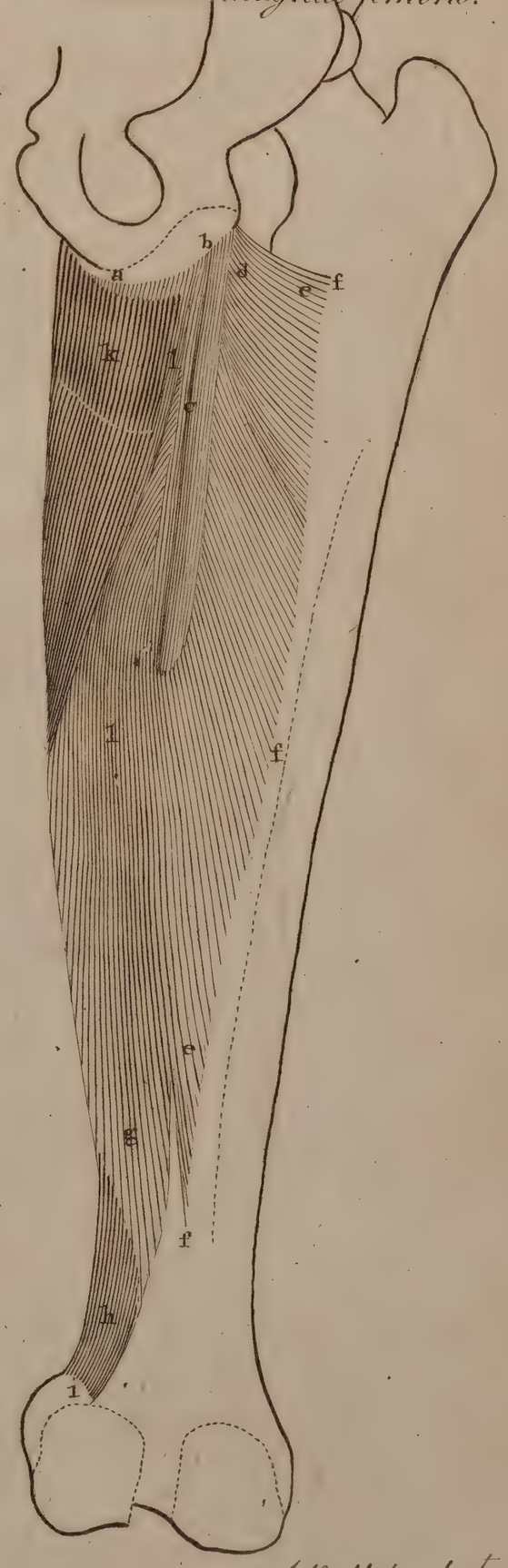


XIV.
Iliacus internus.

XV.
Psoae magni & Iliaci interni.

XVI.
Adductor magnus femoris.

XVII.
Adductor magnus femoris.



A. Bell Sculpt.

FIGURE X.

The obturator internus.

a a a Its tendinous origin from the fore part, and more than half the circumference of the great foramen in the os pubis; whence it firſt proceeds backwards through the ſide of the pelvis, and then bends round the margin of the iſchium at b, goes through the ſinus or notch that is betwixt the acute proceſs and the tuberculum iſchii; and afterwards it runs along the back of the iſchium.

c The tendon, in which it ends; inſerted at the inner and fore part of the mount of the trochanter major.

The *ſyſtematic connexion* appears in Tab. VII. *H—P* in the hip; where, as in this figure, the extremity lies hid behind the trochanter major. Then in Tab. VI. w x x y in the lower part of the trunk; where at its origin it lies hid behind the levator ani e, and the coccygeus d; the extremity being under the gemini q. s. And what there appears naked, is in Tab. V. covered by the gluteus magnus *c* in the buttock.

FIGURE XI.

The gemini or gemelli.

a The uppermoſt of the gemini, ariſing at b from the outer part of the end of the acute proceſs of the iſchium, near the ſinus or notch through which the obturator internus bends itſelf.

c The tendinous extremity.

d The lower of the gemini, ariſing at e e from the outer part of the tuberculum iſchii, near the lower part of the ſinus through which the obturator internus bends itſelf.

f The inner part of its beginning, ariſing outwardly at g g from the iſchium, and from the lunar edge of the ſinus through which the obturator internus bends itſelf.

h The tendinous ending.

The extremities being conjoined with the tendon of the obturator internus, are inſerted therewith into the inner and fore part of the mount of the trochanter major.

The *ſyſtematic connexion* appears in Tab. VI. q. s in the lower part of the trunk; where part of it is covered by the obturator internus w y; and the extremities themſelves lie hid behind the trochanter major, as in the preſent figure. In Tab. V. it lies under the gluteus magnus *c* in the buttock.

FIGURE XII.

The pſoas magnus.

a The tendinous beginning of its firſt head, ariſing at b from the lower edge of the body of the firſt dorſal vertebra, and at c from the ligament that is placed betwixt the body of that and the uppermoſt lumbal vertebra. And in ſome it ariſes from the next upper part of the body of that vertebra.

d e The tendinous beginning of the ſecond head, ariſing at d from the lower edge of the body of the fifth or uppermoſt lumbal vertebra, and at e from the ligament that is placed betwixt the body of that and the body of the next or fourth vertebra: and in others it ariſes even from the upper part of the body of the ſame fourth vertebra.

f g The tendinous beginning of the third head, ariſing at f from the lower margin of the body of the fourth lumbal vertebra, and from the ligament g that is betwixt the body of that and the body of the third vertebra: and in others alſo from the next adjacent upper part of the body of the third vertebra.

h i The tendinous beginning of the fourth head, ariſing at h from the lower edge of the body of the third lumbal vertebra, and at i from the ligament that is betwixt the body of that and of the ſecond vertebra: and in others alſo from the next adjacent upper part of the body of the ſecond vertebra.

k l The tendinous beginning of the fifth head, ariſing at k from the lower edge of the body of the ſecond lumbal vertebra, and from the ligament l that is betwixt the body of that and the body of the firſt vertebra: and in others alſo it ariſes from the next adjacent upper part of the body of the firſt lumbal vertebra.

m The tendon, in which it ends.

n n The place from whence the fleſh of the iliacus internus is cut off, at its conjunction with the tendon of that muſcle.

Add here Fig. 13. and 15.

The *ſyſtematic connexion* appears in Tab. IV. t &c. in the trunk; where it is in part covered by the pſoas parvus r s, and the diafragm Q R. Then in Tab. III. *t u* in the thigh; where only that part which is in the thigh appears. Then in Tab. II. z in the thigh; in part covered by the internal obliquus of the abdomen O in the trunk, and alſo by the pectineus *C* in the thigh. Then in Tab. I. F. in the thigh, covered by the obloquus externus of the abdomen u v in the trunk, and by the pectineus E in the thigh, and by the ſartorius H.

FIGURE XIII.

The heads of the great pſoas.

Theſe are all cut off from the pſoas, under which they that ariſe from the bodies of the vertebræ are partly ſeated; but thoſe heads from the tranſverſe proceſſes are entirely ſeated under the muſcle.

a. d. g. k. n The five heads, which ariſe from the bodies of the vertebræ and their intermediate ligaments.

a The tendinous beginning of the firſt head, ariſing at b from the lower margin of the body of the loweſt dorſal vertebra, and at c from the ligament that is betwixt the body of that and the body of the uppermoſt lumbal vertebra.

d The ſecond head, which ariſes with a tendinous origin e f, at e from the lower margin of the body of the fifth lumbal vertebra, and at f from the ligament that is betwixt the body of that and of the fourth or next lumbal vertebra.

g The third head, which ariſes with a tendinous beginning h i, at h from the lower margin of the body of the fourth lumbal vertebra, and at i from the ligament that is betwixt the body of that and the third lumbal vertebra.

k The fourth head, ariſing with a tendinous origin l m; at l from the lower margin of the body of the third lumbal vertebra, and at m from the ligament that is betwixt the body of that and of the ſecond vertebra of the loins.

n The fifth head, which ariſes with a tendinous origin o p; at o from the lower margin of the body of the ſecond lumbal vertebra, and at p from the ligament betwixt the body of that and of the firſt lumbal vertebra.

q. s. u. w. y The five heads, which ariſe from the fore and lower part of the tranſverſe proceſſes of the lumbal vertebræ.

q The firſt head, ariſing with a tendinous beginning at r from the tranſverſe proceſs of the fifth vertebra.

s The ſecond head, ariſing with a tendinous origin t from the tranſverſe proceſs of the fourth vertebra.

u The third head, ariſing with a tendinous origin v from the tranſverſe proceſs of the third vertebra.

w The fourth head, ariſing with a tendinous origin x from the tranſverſe proceſs of the ſecond lumbal vertebra.

y The fifth head, ariſing with a tendinous origin z from the tranſverſe proceſs of the firſt vertebra.

Add here Fig. 12. and 15.

FIGURE XIV.

The iliacus internus.

a The portion, by which it ariſes from the back part of the tranſverſe proceſs of the firſt or lowermoſt lumbal vertebra.

b The origin from the ligament k.

c c d The firſt of its origination from the inner ſurface of the os ilium, juſt below the ſpine of that bone; and its origin is continued from the whole upper ſurface of that bone.

Below d, where the criſta or ſpine of the os ilium terminates before, it alſo ariſes from the anterior part of the os ilium, and then from its inner ſurface, and from the lower part of the root of the protuberance that ſtands out from its ſaid margin; and likewiſe from the adjacent part of the capſule that contains the joint of the thigh-bone.

e The concave part of the muſcle, next the cavity of the abdomen.

f f The joining of the fleſh of this muſcle with the tendon of the pſoas; it alſo coheres beneath it.

g The inſertion alſo of the fleſhy part itſelf of this muſcle, below the tendon of the ſaid pſoas magnus.

h The place where the pſoas magnus is cut off.

i The tendon common to the pſoas magnus and iliacus internus.

Add here Fig. 15.

The *ſyſtematic connexion* appears in Tab. IV. y in the trunk; where it lies partly under the pſoas magnus t; then in Tab. III. *s* in the thigh, where only that portion of it can be ſeen which enters into the thigh; it is alſo in part covered by the tranſverſus of the abdomen p p in the trunk, and partly by the pſoas magnus *t u* in the thigh. Then in Tab. II. y in the thigh; covered by the obliquus internus of the abdomen O O in the trunk, the pſoas magnus z in the thigh, the pectineus *C*, and the rectus x. Then in Tab. I. G in the thigh; covered by the obliquus externus of the abdomen u in the trunk, the pſoas magnus F in the thigh, and the ſartorius H.

k The ligament, that is extended from the tranſverſe proceſs of the loweſt lumbal vertebra, to the neareſt part of the ſpine of the ilium.

FIGURE XV.

The inſertion of the pſoas magnus and iliacus internus, in its back part.

a The iliacus internus.

Add here Fig. 14.

The *ſyſtematic connexion* appears in Tab. VIII. *p* (and the reſt of the iliacus internus *o*) in the hip and thigh, where the external obturator *r* covers it in part. Then in Tab. VII. *Y* in the hip and thigh; covered alſo in part by the obturator externus *S*. And what is there naked, in Tab. VI. lies behind the quadratus femoris z in the lower part of the trunk.

b The tendon, common to the pſoas magnus and iliacus internus, inſerted at c c into the leſs trochanter, which it in a manner encompaſſeth.

Add here Fig. 12. and 13.

The *ſyſtematic connexion* appears in Tab. VIII. *q* in the hip and thigh, where part of the end is covered by the obturator externus *r*, with the adductor of the thigh *z*. Then in Tab. VII. *O* in the hip and thigh, where part of the end is in the ſame manner covered by the obturator externus *S*, and the adductor magnus femoris O. And what is there uncovered, in Tab. VI. lies behind the quadratus femoris z in the lower part of the trunk.

The remaining part is behind the pſoas magnus Tab. VIII. *n* in the hip. Then in Tab. VII. y in the hip. In Tab. VI. m in the lower part of the trunk; and the reſt lies behind the pyriformis n, and the gluteus medius i.

FIGURE XVI.

The adductor magnus of the thigh, in its fore part.

a a Its origin from the outer part of the anterior edge of the os pubis, near its ſynchondroſis; from whence it continues to ariſe as far as the tubercle of the iſchium.

b. c. d Portions which are in ſome degree diſtinguiſhed one from the other, chiefly by the different courſe of the fibres; and which together make the upper extremity of this muſcle, inſerted along the rough line on the back part of the thigh-bone.

e f A portion that is more diſtinct from the reſt, ending in the lower extremity, inſerted at the lower condyle of the femur. f The tendon that ariſes from the fleſhy part.

Add here Fig. 17.

The *ſyſtematic connexion* appears in Tab. IV. *k l m n o p* in the thigh; where part of it is covered by the common end of the pſoas magnus and iliacus internus x. Then in Tab. III. *D D H L X* in the thigh, where the reſt of it is covered by the ſame common end of the pſoas magnus and iliacus internus *u s*, and by the adductor brevis of the thigh *y*, with the gracilis *Y*. Then in Tab. II. *P* in the thigh; where alſo the reſt of it is covered by the common end of the pſoas magnus and iliacus internus z y, the pectineus *C*, the long adductor of the thigh *D*, the gracilis *L*, and the vaſtus internus *S*. Then in Tab. I. C in the thigh; covered by the ſartorius H, the adductor longus of the thigh D, the gracilis B, and the other muſcles remarked in Tab. II.

FIGURE XVII.

The adductor magnus of the thigh, in its back part.

a b Its origin from the outer part of the tuberculum iſchii, as far as its bottom a the tendinous portion. b the aponeuroſis that runs thro' the fleſhy part at c.

d The portion that ſprings from the fore part, where it ariſes along the height of the os pubis.

e e The broad extremity, which ends in ſome meaſure tendinous, at its inſertion along the femur at f f f into the linea aſpera, that runs along the whole back part of that bone.

g The lower end, that forms the tendon h, inſerted at i into the middle of the upper part of the ſide of the inner condyle of the thigh-bone.

k The impreſſion made in this muſcle by the gluteus magnus.

l l All that part which is made concave, by the impreſſion of the ſemimembranoſus and ſemitendinoſus.

Add here Fig. 16.

The *ſyſtematic connexion* appears in Tab. VIII. *ſt*—D in the thigh. Then in Tab. VII. K N in the thigh; placed alſo under the ſemimembranoſus A C, and the ſhorter head of the biceps cruris P. Then in Tab. VI. *e e* in the thigh; covered alſo by the biceps cruris *h l*, by the ſemitendinoſus *p q*, the ſemimembranoſus *w*; and at its origin hid behind the tranſverſus of the perinæum h, and the ſecond tranſverſalis g in the lower part of the trunk. Then in Tab. V. *b* in the thigh; placed under the ſemimembranoſus *n*, and the ſemitendinoſus *q*, as in Tab. VI.; alſo under the gluteus magnus *e* in the buttock.

THE
Twenty-ſecond Anatomical Table
OF THE
HUMAN MUSCLES
EXPLAINED.

Remaining muſcles of the thigh.

Add here Tab. XXI.

FIGURE I.

The adductor longus of the thigh, in its fore part.

a The tendinous beginning, ariſing at b from the ligament by which the ſynchondroſis of the oſſa pubis is tied together in its fore part, immediately above the protuberance that is in the anterior and upper part of the os pubis: and at c from the ſaid protuberance itſelf.

d The tendinous part of its extremity.

Add here Fig. 2.

The *ſyſtematic connexion* appears in Tab. II. *D H* in the thigh; covered by the vaſtus internus *W S*, and the gracilis *L X*; and hid alſo behind the teſticle and cremaſter muſcle p. Then in Tab. I. D in the thigh, covered by the ſartorius H, the gracilis B; and likewiſe hid behind the teſticle and cremaſter z.

Laterally it appears in Tab. IX. m in the left hip and thigh.

FIGURE II.

The end of the long adductor of the thigh, in its back part.

a a The fleſhy part cut off.

b The tendinous part of its end, inſerted at c c along the middle of the thigh-bone, into the rough line that appears along the poſterior ſide of that bone.

Add here Fig. 1.

FIGURE III.

The end of the adductor brevis femoris, in its back part.

a a The fleſhy part cut off.

b. c. d The extremity divided into three portions, of which portions the part e is tendinous.

f g h h Their inſertion into the rough eminence or line that runs along or divides the back part of the femur; and particularly into the upper part of it that is next below the trochanter minor.

Add here Fig. 4.

FIGURE IV.

The adductor brevis of the thigh, in its fore part.

a The head which is outwardly tendinous, ariſing at b from the fore part of the os pubis at the ſynchondroſis or cartilaginous juncture, and below the origin of the adductor longus: ariſing alſo at c from the ligament that covers or confines the ſaid ſynchondroſis.

d The tendinous end.

In the middle is an impreſſion or cavity made in this muſcle, by the pectineus and long adductor of the thigh.

Add here Fig. 3.

The *ſyſtematic connexion* appears in Tab. III. *y z C* in the thigh; covered by the gracilis *O*, and the iliacus internus with the pſoas magnus *s u*, and hid with its extremity behind the thigh-bone. And what there appears naked, is in Tab. II. placed behind the long abductor of the thigh *D H*, with the pectineus *C*, and vaſtus internus *W S*.

FIGURE V.

The pectineus, in its fore part.

a a b Its origin at a a from the oblong eminence which runs all along the upper part of the os pubis, as far as the protuberance that ſtands out from its fore part near the ſynchondroſis; and at b from the ſaid protuberance itſelf.

c The tendinous end.

Add here Fig. 6.

The *ſyſtematic connexion* appears in Tab. II. *C* in the thigh, covered by the long abductor of the thigh *D*, the vaſtus internus *W S*, the pſoas magnus z, with the iliacus internus y, and the internal obliquus of the abdomen O in the trunk; and hid alſo behind the cremaſter p q in the trunk. Then in Tab. I. E in the thigh; covered likewiſe by the long abductor of the thigh D, and by the ſartorius H, and the external obliquus of the abdomen v in the trunk; hid alſo behind the cremaſter z in the trunk.

Laterally its connexion appears in Tab. IX. n in the left hip and thigh.

FIGURE VI.

The end of the pectineus, in its back part.

a a The fleſhy part here cut off.

b The tendinous end, inſerted at c c into the linea aſpera of the thigh-bone, where it is continued downward a little below the leſs trochanter.

Add here Fig. 5.

TAB: XXII.

I
Adductor longus femoris.

II
Addductor longus femoris.

III
Adductor brevis femoris.

IV
Adductor brevis femoris.

V
Pectineus.

VI
Pectineus.

VII
Obturator externus

VIII
Obturator externus

IX.
Semimembranosus.

X.
Semimembranosus. Biceps cruris.

XI.
Semitendinosus. Biceps cruris.

XII.
Biceps cruris. Semitendinosus.

A Bell Sculp.

FIGURE VII.

The obturator externus, in its back part.

a The part that ſtops up the great foramen in the os pubis.
b b Part of its origin from the inner edge of the great foramen in the os pubis.
c The tendinous part of its extremity; the tendinous end of which is inſerted into the back part of the inner ſide of the root of the great trochanter.

Add here Fig. 8.

The *ſyſtematic connexion* appears in Tab. VIII. *r r ſ t* in the iſchium, partly hid behind the great abductor of the thigh *z*. Then in Tab. VII. *S S W* in the iſchium, covered by the obturator internus *H—P*, and partly hid behind the adductor magnus of the thigh O, and the ſemimembranoſus B in the thigh. Then in Tab. VI. *n n* in the lower part of the trunk; covered by the obturator internus w y, and the lower of the gemini s, and the quadratus femoris z; partly hid alſo behind the coccygeus d: and what is there uncovered, in Tab. V. lies behind the gluteus magnus *c* in the buttock.

FIGURE VIII.

The obturator externus, in its fore part.

a a The tendinous beginning, ariſing at b b b from the fore part of the os pubis and iſchium, and from the anterior half part of the circumference of the great foramen in the os pubis, continuing to ariſe from the top of the foramen to its bottom.

Add here Fig. 7.

The *ſyſtematic connexion* appears in Tab. IV. *a b* in the trunk; covered by the great abductor of the thigh *k l*, in the thigh, and the pſoas magnus, with the iliacus internus x. Then in Tab. III. *w x* in the trunk and thigh, covered in like manner by the adductor magnus of the thigh *D*, and the pſoas magnus with the iliacus internus *u*, and alſo by the ſhort abductor of the thigh *y z*. And what is there (in Tab. III.) naked, in Tab. II. lies behind the pectineus *C* in the thigh.

Muſcles of the leg.

Add here Tab. XXIII. Fig. 1. 2. 3. 4. 5. 6. 7.

FIGURE IX.

The ſemimembranoſus, in its fore part.

a The tendon, by which it begins.
b The origin of the tendinous tail from its fleſhy part, which is afterwards wholly tendon at c, and inſerted chiefly at d into the upper head of the tibia, juſt below its upper round edge that is near the back part of its inner ſide.
e The anterior aponeuroſis, inſerted into the edge of the tibia, on that ſide where the principal part of the tendon inſerts itſelf.

Add here Fig. 10. a—g.

The *ſyſtematic connexion* appears in Tab. III. *P S W* in the thigh; covered by the gracilis *Y* A B, the adductor magnus of the thigh *D H L*, and above the quadratus. And what appears naked in Tab. III. is in Tab. II. covered by the vaſtus internus *S* in the thigh. And in the firſt table it appears behind the inner head of the gemellus.

FIGURE X.

The ſemimembranoſus, and ſhort head of the biceps of the thigh, in their back part.

a—g The *ſemimembranoſus*.
a The tendon, by which it begins, ariſing at b from the upper part of the back of the tuberculum iſchii, near its outer ſide.
c The fleſhy belly.
d The origin of its tendinous tail from the fleſhy belly of the muſcle.
e The principal part of the ſaid tail, inſerted into the upper head of the tibia.
f The poſterior aponeuroſis of the ſaid tail, inſerted into the rough oblique eminence that is below the back part of the root of the upper head of the tibia, where it ſuſtains the inner condyle of the femur.
g The anterior aponeuroſis, which it inſerts into the inner edge of the tibia.
In the head and upper part of the belly of this muſcle, is a cavity impreſſed by the ſemitendinoſus.

Add here Fig. 9.

The *ſyſtematic connexion* appears in Tab. VII. A—G in the thigh; covered by the gracilis H I. Then in Tab. VI. *w—C* in the thigh; covered in like manner by the gracilis *v t*, and by the ſemitendinoſus *p—s*, and the biceps of the leg *h l*. Then in Tab. V. *n n o p* in the thigh, covered by the ſame muſcles as in Tab. VI. and moreover by the gemellus *P S* in the leg.

Laterally its connexion appears in Tab. IX. P Q R S in the right leg.

h—m *The ſhort head of the biceps muſcle of the leg.*
i Its origin near the middle of the thigh-bone, from the lower part of the rough line that is extended along the back part of that bone. It alſo ariſes from the tendinous partition, that is placed betwixt itſelf and the vaſtus internus muſcle.
k k Part of the tendon cut off, which ariſes from the longer head of this muſcle.
l Part of the tendon, that is increaſed by the acceſſion of the fleſh of the ſhorter head.
m The tendinous end, inſerted at n into the outer part of the upper head of the fibula.

Add here Fig. 11. g—p. and Fig. 12. a—g.

The *ſyſtematic connexion* appears in Tab. VII. P, &c. in the thigh. Then in Tab. VI. *l l*, &c. in the thigh; covered by the longer head *ſ u*.

FIGURE XI.

The ſemitendinoſus and biceps of the leg, poſteriorly.

a—f The *ſemitendinoſus*.
a The tendinous part of its origin, ariſing at b from the back of the tuberculum iſchii, together with the longer head of the biceps; and then joining the tendinous beginning of that head at c c; from whence its beginning goes off.
d The fleſhy part of its origin, which in ſome other ſubjects is tendinous, ariſing from the back of the tuberculum iſchii.
e The tendon, in which it ends.
f The impreſſion made by the gluteus magnus.

Add here Fig. 12. h—m.

The *ſyſtematic connexion* appears in Tab. VI. *p—s* in the thigh; covered by the longer head of the biceps *h*, and in the end placed behind the ſemimembranoſus *C*. Then in Tab. V. *q r* in the thigh; covered alſo by the longer head of the biceps *ſ*, the ſemimembranoſus *p*, and the gluteus magnus *c* in the buttock.

Laterally its connexion appears in Tab. IX. T U in the right leg, and z in the left thigh.

g—p The *biceps of the leg*.
g The longer head of the biceps.
h The tendon, by which it begins, and ariſes at i from almoſt the middle of the upper part of the back of the tuberculum iſchii, conjoined at its origin with the beginning of the ſemitendinoſus.
k k The ſhorter head of this muſcle.
l The common tendon, in which the two heads terminate; ariſing firſt at l from the ſurface of the fleſh of the longer head, then increaſed by the acceſſion of the fleſh of the ſhorter head, and afterwards inſerted by the ſhort end n, into the outer part of the upper head of the fibula at o.
p The impreſſion made in this muſcle by the gluteus magnus.

Add here Fig. 10. h—n, and Fig. 12. a—g.

The *ſyſtematic connexion* appears in Tab. VI. *h—o* in the thigh. Then in Tab. V. *ſ—x* in the thigh, covered by the gluteus magnus *c* in the buttock.

Laterally its connexion appears in Tab. IX. *a—f* in the left leg.

FIGURE XII.

The biceps and ſemitendinoſus, in their fore part.

a—g The *biceps of the leg*.
a The longer head of the biceps. b the tendon, by which it begins, and which runs a conſiderable way through its origination, from that part where it joins the ſemitendinoſus.
c The ſhorter head of this muſcle.
d The tendon, in which it ends; and of which principal part e is inſerted into the outer part of the upper head of the fibula: g the part belonging to the tibia, at its outer part before the head of the fibula.

Add here Fig. 11. g—p, and Fig. 10. h—n.

The *ſyſtematic connexion* appears in Tab. III. C D E F in the thigh; where the reſt lies behind the thigh-bone and the large adductor of the thigh *D D H*. Then in Tab. II. *ſ v t* in the leg and thigh; placed in like manner behind the vaſtus externus *d*. Then in Tab. I. *X P S* in the thigh and leg; covered in like manner by the vaſtus externus P, and placed behind the outer head of the gemellus, and beginning of the plantaris.

h—m The *ſemitendinoſus*.
i The tendinous part of its beginning; which at k k is conjoined with the tendinous origin of the longer head of the biceps; from whence the beginning of this muſcle goes off.
l l The tendon, in which it ends; inſerted at m into the inner ſide of the tibia, juſt below the gracilis.

Add here Fig. 11. a—f.

The *ſyſtematic connexion* appears in Tab. II. *r* in the leg; where the reſt of it is placed behind the gracilis *q p*, and the adductor magnus of the thigh. Then in Tab. I. *a* in the thigh; placed under the ſartorius *Y*.

THE

Twenty-third Anatomical Table

OF THE

HUMAN MUSCLES

EXPLAINED.

Remainiug muſcles of the leg.

Add here Tab. XXII. 9. 10. 11. 12.

FIGURE I.

The popliteus.

a The tendon, by which it begins, and ariſes at b from a ſinus that is in the middle of the lower part of the outer ſide of the external condyle of the femur, juſt above the margin of that part which reſts on the tibia.

That part which uſually ariſes either from the outer edge of the ſemilunar cartilage of the knee, or from the broad ligament of the joint of the knee, could not be here repreſented.

c The tendinous portion.

d d The extremity, by which it inſerts itſelf into that part of the back ſide of the tibia, that is betwixt the root of its upper head and the oblique eminence, from whence the ſoleus ariſes: and the whole breadth by which it terminates, is inſerted into the inner edge of the tibia, that is next the other leg.

The *ſyſtematic connexion* appears in Tab. VII. W X Y in the leg; covered by the biceps cruris R S in the thigh, and the outer head of the gemellus T in the leg, with the ſemimembranoſus G. Then in Tab. VI. *L X P* in the leg; covered alſo by the biceps *o* in the thigh, and the outer head of the gemellus *H* in the leg, and the ſemimembranoſus *C*, with the plantaris *S*, and the ſoleus A *Y*. Then in Tab. V. *D* in the leg; covered by the biceps *w x* in the thigh, and the gemellus A *P* in the leg.

FIGURE II.

The rectus of the leg, laterally.

a The principal tendon, by which it ariſes at b b from the upper part of the protuberance, that is in the fore edge of the os ilium.

c Another tendinous beginning, ariſing at d d from the upper and poſterior part of the edge of the acetabulum, and from the adjacent part of the capſule of the joint or upper head of the femur.

e The ſurface of the fleſhy belly, which continues for ſome way outwardly tendinous, from thoſe originations.

f The tendon, in which it ends, beginning its origination ſuddenly from the inner part of the muſcle at g.

h The place where the tendon is cut off.

Add here Fig. 3.

The *ſyſtematic connexion* appears in Tab. IX. *l—p* in the left leg; covered by the ſartorius p, and the extenſor vaginalis of the thigh q; and A B C in the right leg.

FIGURE III.

The rectus cruris, in its fore part.

a The principal tendon, by which it ariſes at b b from the inner part of the protuberance, that is in the anterior edge of the os ilium.

Near c is the other tendinous origination.

d That part of the fleſhy belly, which is for ſome length outwardly tendinous, from an excurſion of its tendinous originations.

e e The oblique declenſion of the fibres, in each ſide of the ſurface of the muſcle, from the middle downwards.

f The tendon, in which it terminates; and which inſerts itſelf at g g into the patella, and afterwards joins to the fore part of the ligament that belongs to the tibia and patella.

Add here Fig. 2.

The *ſyſtematic connexion* appears in Tab. I. T—X in the thigh; covered by the ſartorius H, and the extenſor vaginalis of the thigh M. Then in Tab. II. x, and *i k l* in the thigh; covered by the iliacus internus y, and the gluteus minor u in the trunk.

i The ligament that joins the tibia and patella.

k k The place where the ſaid ligament ariſes below from the patella.

l l The place of its inſertion into the tibia, and all the way under the part m.

The *ſyſtematic connexion* appears in Tab. I. *D H L* in the leg. And in Tab. II. *m n o* in the leg.

Laterally its connexion appears in Tab. IX. D E F G in the right leg: and *ſ t u* in the left leg.

FIGURE IV.

The ſartorius.

a The origin, which is outwardly tendinous, ſpringing at b from the anterior extremity of the ſpine of the os ilium, and from the next adjacent part of the anterior edge of that bone.

c The tendon, in which it ends; inſerted at d d into the inner ſide of the tibia near the lower part of the protuberance, to which is fixed the ligament that joins the patella to the tibia.

The *ſyſtematic connexion* appears in Tab. I. H I *W Y O* in the leg and thigh; in part concealed behind the vaſtus internus Y.

Laterally its connection appears in Tab. IX. K L M in the right leg, and p in the left leg.

In its back it appears in Tab. V. *l* in the thigh.

FIGURE V.

The gracilis.

a The tendinous beginning, near the ſynchondroſis of the pubis, ſpringing from the ligament at b that ties together the ſaid ſynchondroſis. It alſo ariſes below the ſame from the edge of the os pubis.

c The impreſſion made in this muſcle by the adductor longus of the thigh.

d The tendon, in which it ends; inſerted at e into the tibia, juſt below the inſertion of the tendon of the ſartorius.

The *ſyſtematic connexion* appears in Tab. III. *Y*—B in the thigh. Then in Tab. II. *L X p q* in the thigh and leg; where in the end it is a little covered by the ſartorius *r*; and is partly hid behind the vaſtus internus *S*, and by the teſticle with its cremaſter muſcle p in the trunk. Then in Tab. I. B in the thigh; covered by the ſartorius H *W Y*, and hid behind the vaſtus internus Y, and by the teſticle with its cremaſter muſcle z in the trunk.

In its back part the connexion appears in Tab. VII. H I in the thigh, along its inner ſide, by the ſemimembranoſus C D E. Then in Tab. VI. *v t* in the thigh, below ſeated behind the ſemitendinoſus *s*, and above concealed behind the tranſverſe muſcles of the perinæum h. g in the lower part of the trunk. Then in Tab. V. *i k* in the thigh; below ſeated behind the ſemitendinoſus *r*, and the ſartorius *l*; above, it lies behind the gluteus magnus *c* in the buttock.

Laterally its connexion appears in Tab. IX. N O in the right leg.

e The ligament, by which the ſynchondroſis of the pubis is tied together in its fore part.

FIGURE VI.

The vaſtus internus and externus, in their poſterior part.

a a b The *vaſtus internus*.

a a Its origination from the oblique eminence, that ſtands out from below the leſs trochanter, from the bottom of the root of the neck of the femur, to the long rough line or poſterior ſpine of the femur; and then continues to ariſe all the way from the inner ſide of the ſaid linea aſpera, through its whole extent.

b The portion that is tendinous from the whole beginning for a conſiderable way.

Add here Fig. 7. k—p.

The *ſyſtematic connexion* appears in Tab. VI. *u* in the thigh; covered by the gracilis *v t*, the ſemimembranoſus *w w x*, and the adductor magnus of the thigh *e*. Then in Tab. V. *m* in the thigh, covered by the fore-mentioned muſcles, and by the ſartorius *l*.

c c d e The *vaſtus externus*.

c c Its origination from the outer part of the root of the trochanter major, and along the whole extent of the ſpine called *linea aſpera*, which ſtands out from the great trochanter almoſt to the outer condyle of the thigh-bone.

It goes off partly likewiſe from the tendinous partition that divides it from the ſhorter head of the biceps; which partition is here taken away.

d e The tendinous part. e the impreſſion made in this muſcle by the gluteus magnus.

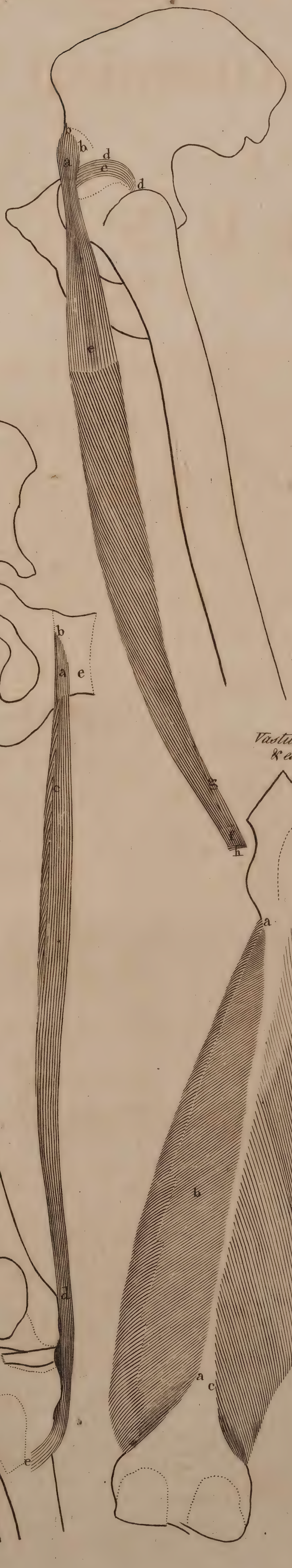
Add here Fig. 7. a—i.

The *ſyſtematic connexion* appears in Tab. VI. *b—d* in the thigh; where it is covered by the biceps muſcle of the leg *h l m n*. Then in Tab. V. *y z* in the thigh; covered alſo by the biceps cruris *ſ t u w*, and it is alſo hid behind the gluteus magnus *c* in the buttock.

TAB. XXIII.

I.
Popliteus.

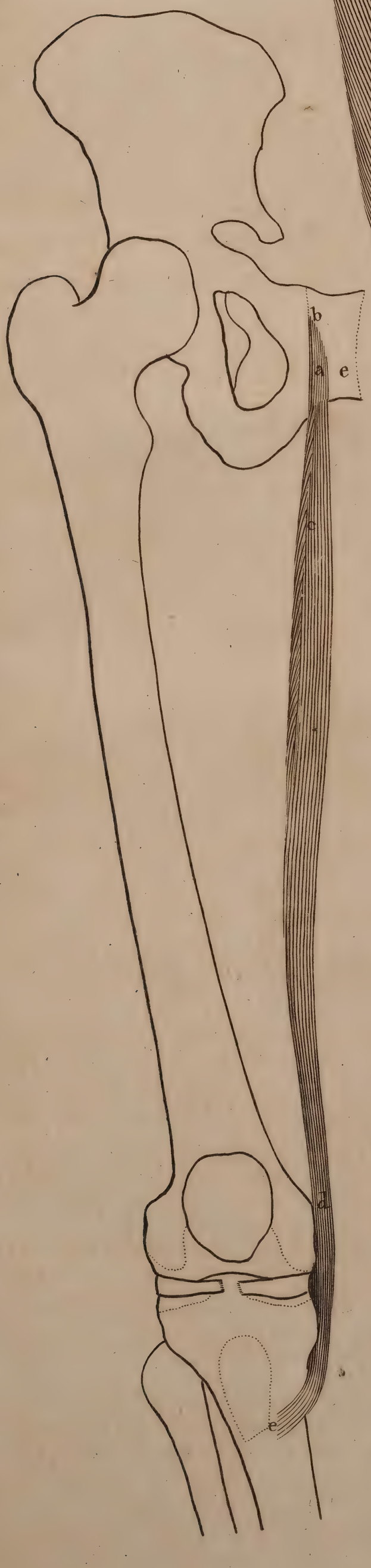
II.
Rectus cruris.



IV.
Sartorius.

III.
Rectus cruris.

V
Gracilis



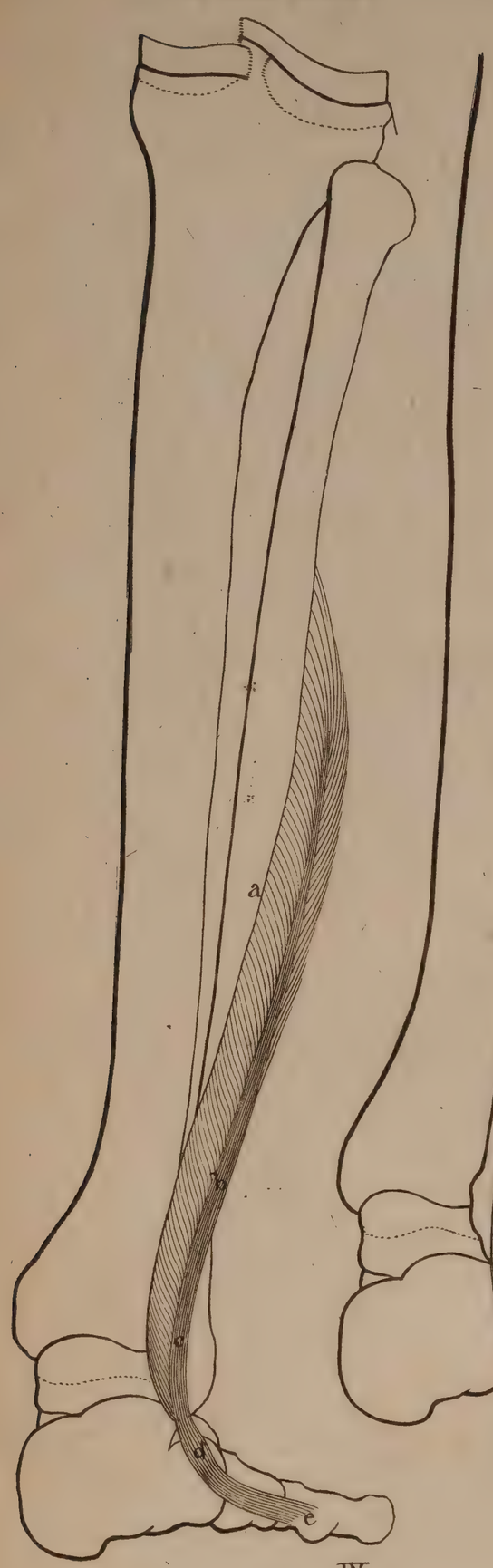
VI.
Vastus internus & externus.

VII.
Vastus externus & internus. cum Crurali.

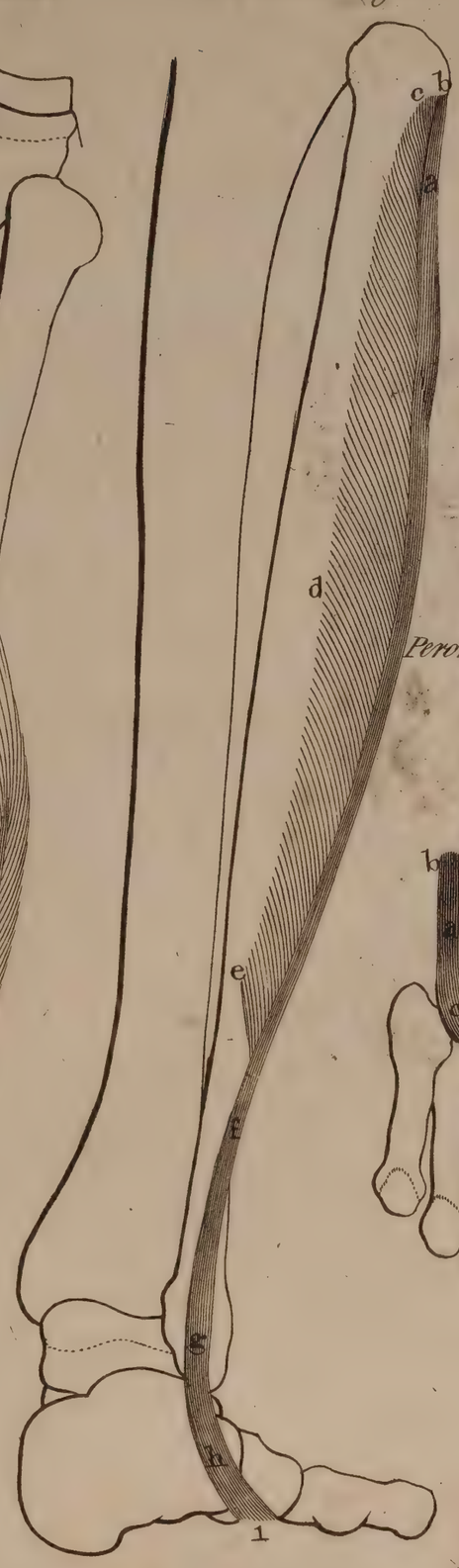
VIII.
Tensor vaginæ femoris.

A Bell Sculp.

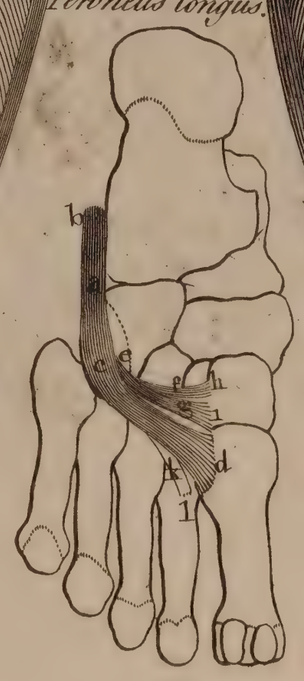
I.
Peroneus brevis.



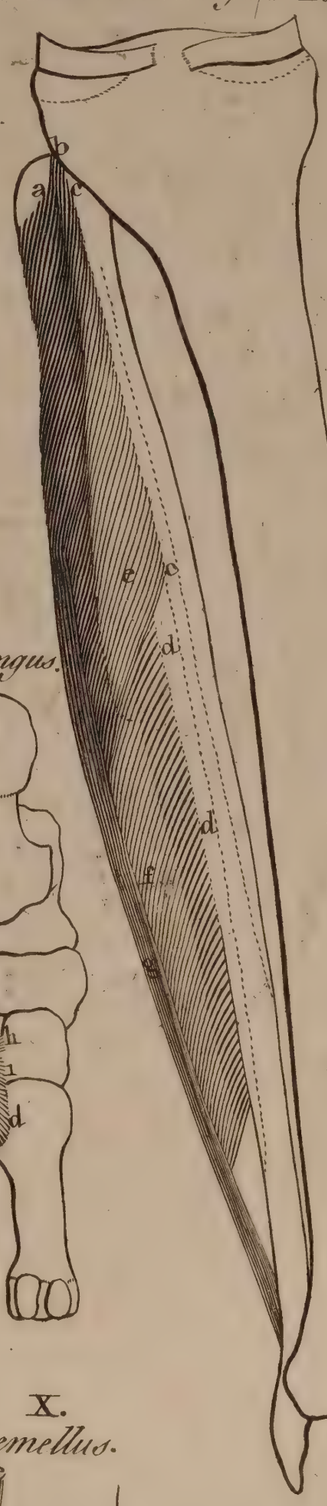
III.
Peroneus longus.



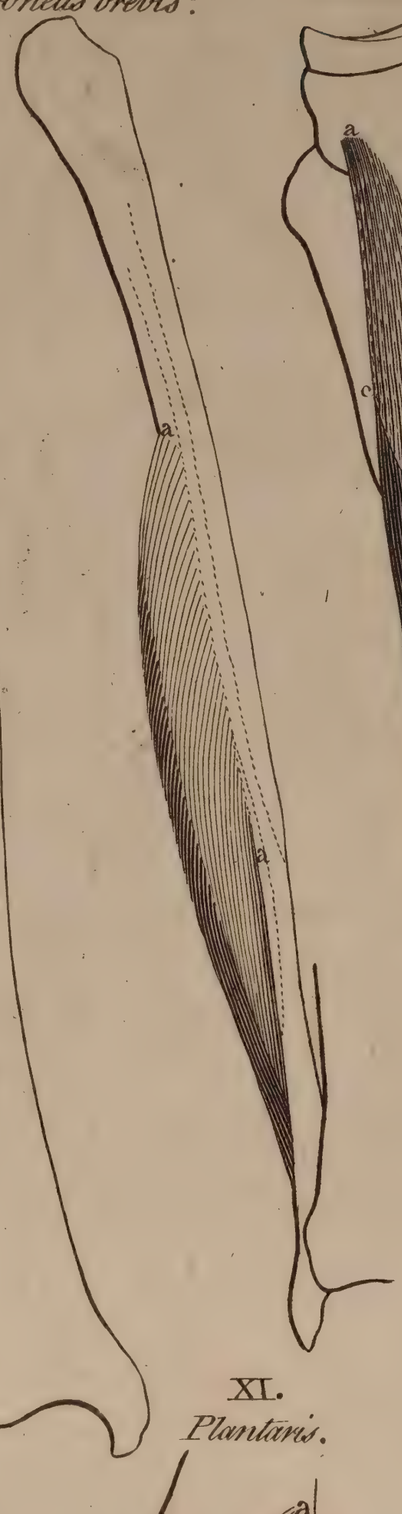
V.
Peroneus longus.



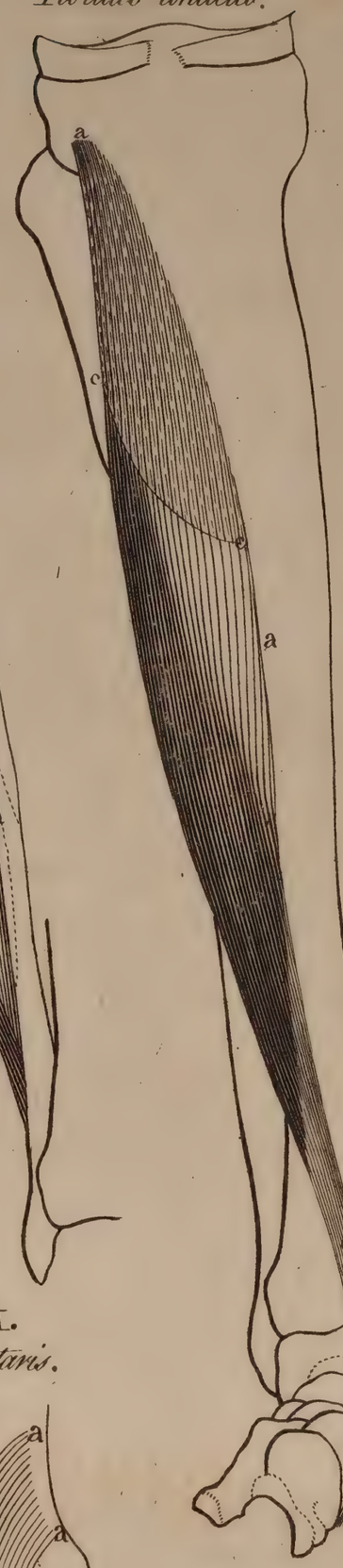
IV.
Peroneus longus.



II.
Peroneus brevis.



VI.
Tibialis anticus.



VIII.
Soleus.

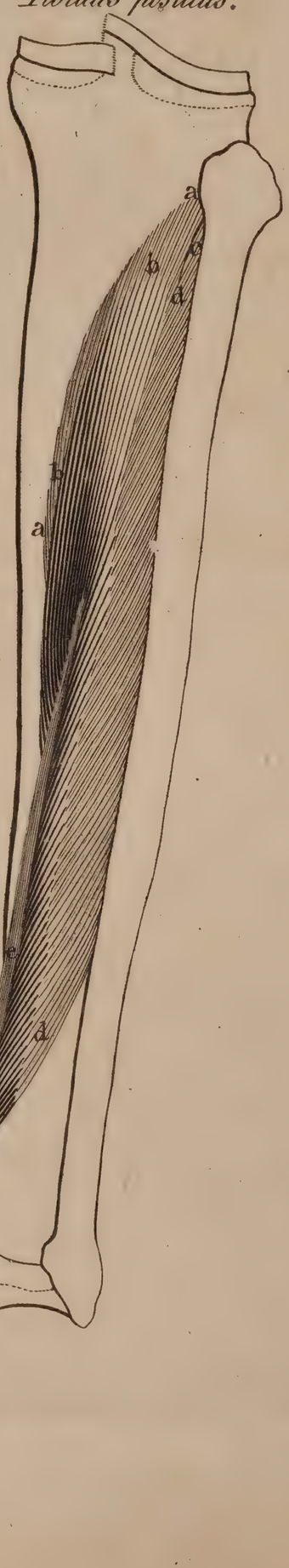
VII.
Tibialis anticus

X.
Gemellus.

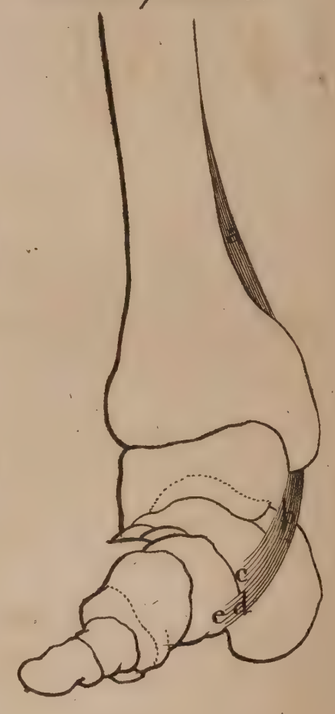
XI.
Plantaris.

IX.
Soleus.

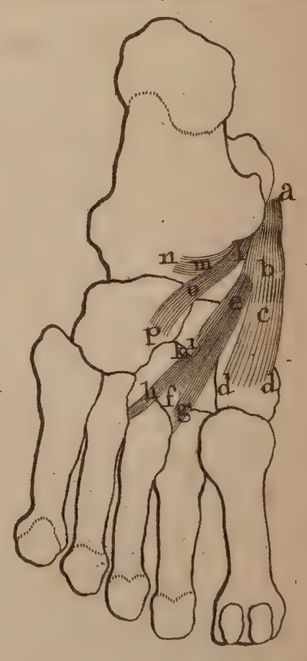
XII.
Tibialis posticus.



XIII.
Tibialis posticus.



XIV.
Tibiales posticus.



A Bell Sculpt.

FIGURE VII.

The vaſtus externus and internus, with the cruræus, in their fore part.

a b c d e f f f g h i i The *vaſtus externus.*

b c Its origin from the oblique eminence that is in the fore part of the femur at the root of its neck betwixt the trochanters, and at c d from the outer part of the root of the great trochanter itſelf.

e A tendinous portion of its origin.

f f f g The conſiderable impreſſion that is made in this muſcle by the rectus extenſor of the leg.

g h The tendon, inſerted at i i into the edge of the patella, on its external ſide, and upper margin.

Add here Fig. 6. c c d e.

The *ſyſtematic connexion* appears in Tab. II. *d—h* in the thigh; covered by the rectus cruris *i k*. Then in Tab. I. P—S in the thigh; covered by the rectus cruris T V, and the extenſor vaginalis of the thigh M O.

Laterally its connexion appears in Tab. IX. *g h i k* in the left leg.

k l m n n o p p The *vaſtus internus.*

l l The impreſſion made in this muſcle by the rectus cruris.

m Its origin from the oblique eminence, that is ſtretched out below the leſs trochanter at the root of the neck of the femur.

n n The part wherein the fleſh of this muſcle joins the tendon of the cruræus.

o The tendon, inſerted at p p into the margin of the patella, on its inner ſide. But above it joins the tendon of the vaſtus externus; and being connected with that, proceeds to the edge of the patella.

Add here Fig. 6. a a b.

The *ſyſtematic connexion* appears in Tab. II. *S—a* in the thigh; covered by the rectus cruris *i k*. Then in Tab. I. Y Z *C* in the thigh; covered by the rectus cruris T V, and the ſartorius H.

Laterally its connexion appears in Tab. IX. H I in the right leg, and *q r* in the left.

q r s The *cruræus* or cruralis muſcle.

r The tendon, ariſing from the fore part of the fleſh. This tendon joins itſelf to the tendons of the vaſtus externus and internus, a little above the knee, and is then inſerted behind them into the upper part of the patella.

s The higheſt part of the origin of the rectus from the oblique eminence, that is in the fore part of the femur at the root of its neck, betwixt the two trochanters. It alſo continues to ariſe from more than the upper half of the whole length of the thigh-bone, from its anterior and outer part.

The *ſyſtematic connexion* appears in Tab. II. *b c* in the thigh; covered by the vaſtus externus *d—h*, and the vaſtus internus *S—a*; alſo by the rectus cruris *i k*. And what is there naked, in Tab. I. lies behind the rectus T in the thigh.

Muſcles of the tendinous vagina, or ſwath of the thigh.

FIGURE VIII.

The tenſor vaginæ femoris.

a The tendinous beginning, ariſing at b from the outer part of the anterior extremity of the ſpine of the os ilium.

c The extremity, from whence the tendinous part that joins it to the tendinous vagina or faſcia of the thigh is cut off.

The *ſyſtematic connexion* appears in Tab. I. M N O in the thigh; where it is covered by the ſartorius H I.

Laterally its connexion appears in Tab. IX. q r s in the left hip and thigh.

THE

Twenty-fourth Anatomical Table

OF THE

HUMAN MUSCLES

EXPLAINED.

Muſcles of the foot.

Add here the *peroneus tertius*, Tab. XXV. Fig. 1. a *h i k*.

FIGURE I.

The peroneus brevis, in its back part.

a Part of its origin from the fibula. Below the ſaid part it continues to ariſe from the ſpine, which terminates the outer edge or ſide of the fibula in its back part; ceaſing to ariſe from the ſaid ſpine near the outer ancle.

b c d The tendon. c The broader and thicker portion of the ſaid tendon, which bends itſelf round the ancle, where it is tied down by a ligament, which ſee in Tab. V. n in the leg: d the part which is alſo thicker and broader than the reſt, where it paſſes thro' the ſecond ligament, near the upper part of the protuberance of the calcaneum; which ſee in Tab. V. o in the foot, and Tab. IX. F in the left foot.

e Its inſertion into the upper and back part of the root of the tubercle in the fifth metatarſal bone, at the outer part of its firſt head.

Add here Fig. 2.

The *ſyſtematic connexion* appears in Tab. VIII. M—R in the leg and foot. Then in Tab. VII. u—x in the leg and foot, covered by the peroneus longus m p q &c. Then in Tab. VI. I—M in the leg and foot; covered in like manner by the peroneus longus N P Q &c. Then in like manner in Tab. V. g—k in the leg and foot; covered by the peroneus longus l m.

FIGURE II.

The peroneus brevis, in its fore part.

a a Its origin from the outer ſide of the fibula, and below from the ſpine which terminates the outer ſide of that bone in its back part.

It alſo ariſes in part from the tendinous vagina or covering of the leg, and from the continuation of that vagina that on one ſide lies betwixt the peroneus longus and brevis, and on the other ſide it has the long extenſor of the toes and the peroneus tertius.

Add here Fig. 1.

The *ſyſtematic connexion* appears in Tab. IV. *z C D* in the leg. Then in Tab. III. M O in the leg; covered by the peroneus longus G L. Then in Tab. II. *z* in the leg, covered by the peroneus longus *w y*, and the long extenſor of the toes, with the peroneus tertius *t w x y*.

Laterally its connexion appears in Tab. IX. B B C C D D E in the left leg, placed behind the peroneus longus *S Y O*.

Alſo in Tab. X. Fig. 20. y, and 21. A, and 22. a.

FIGURE III.

The peroneus longus, in its back part.

a One of its originations, ariſing at b from the lateral outer and fore part of the root of the upper head of the fibula.

c d e The other head, ariſing at c d e from more than the upper half of that part of the ſpine of the fibula which is in its outer ſide, and begins to project or ſtand out a little below its upper head: but from d to e it ariſes beneath.

f The tendon, whoſe firſt knot g bends behind the outer ancle: and the ſecond h is at the eminence in the outer ſide of the calcaneum: i the third, which is at the cubiform bone of the foot.

The ligaments, by which the tendon is tied down at the ancle, and at the protuberance of the calcaneum; ſee Tab. V. n and p in the leg and foot. Add A in the left foot of Tab. IX.

Add here Fig. 4. and 5.

The *ſyſtematic connexion* appears in Tab. VII. m—t in the leg and foot. Then in Tab. VI. N O—T in the leg and foot; covered alſo by the ſoleus *O Y*. Then in Tab. V. *H* l m m in the leg and foot; covered likewiſe by the ſoleus a b.

FIGURE IV.

The peroneus longus, in its fore part.

a The origin of its upper part from the lateral outer ſide of the fore part of the root of the upper head of the fibula; and at b from the adjacent fore part of the tibia.

c c d d The origin of the lower portion, from more than the upper half of that ſpine of the fibula, which is in its external ſide, not much below where its upper head begins to protuberate.

It alſo in part goes off from the tendinous covering of the leg, and from that branch of the ſaid covering which lies betwixt the peroneus longus and the long extenſor of the toes.

e e The impreſſion made in this muſcle by the long extenſor of the toes.

f The lower ſituated portion, in which the peroneus brevis is lodged.

g The tendon, ariſing from the outer part of the fleſh.

Add here Fig. 3. and 5.

The *ſyſtematic connexion* appears in Tab. III. G—L in the leg; where it is partly covered by the peroneus brevis M. Then in Tab. II. *w x y* in the leg; covered by the peroneus brevis *z*, and the long extenſor of the toes A. Then in Tab. I. *p q r* in the leg; covered in like manner by the ſhort peroneus *ſ*, and the long extenſor of the toes *t u*.

Laterally its connexion appears in Tab. IX. *S—O* in the left leg; placed behind the ſoleus *z*.

FIGURE V.

The peroneus longus, in the ſole of the foot.

a The tendon, in which b denotes a knot that is placed at the protuberance of the calcaneum, which is in its outer ſide: and c denotes a more conſiderable knot, where it bends round the eminence that is in the lower part of the cubiform bone of the tarſus, a little after the ſinus of the ſaid bone which is before its eminence.

d Its extremity, inſerted into the bottom and back of the moſt protuberant part of the metatarſal bone belonging to the great toe.

e The portion that goes off from the tendon; and which, paſſing round the cubiform bone of the tarſus, divides into two parts f. g, inſerted at h. i into the great cuneiform bone of the foot.

k Another portion going off from the tendon, inſerted at l into the ſecond metatarſal bone.

For the manner in which it is confined in the ſinus of the cubiform bone by its ligament, ſee in Tab. X. Fig. 21. N O.

Add here Fig. 3. and 4.

The *ſyſtematic connexion* appears in Tab. X. Fig. 22. b—i. Then in Fig. 21. B C D, and betwixt r and l; where it lies under the ligament N O; and covered by the adductor of the great toe l m, and ſhort flexor o p r. Then in Fig. 20. *z a b;* placed behind the ſame muſcles as in Fig. 21. and behind the long flexor of the toes and lumbricales. And what appears naked in Fig. 20. the ſame is in Fig. 19. covered by the abductor of the little toe A B.

FIGURE VI.

The tibialis anticus.

a a Its origin from the tibia, in its uppermoſt end a little before the origin of the long extenſor, whence its origination takes up the whole outer flat ſide of the tibia, extending in breadth from its head along its anterior ſpine as far as the middle of the tibia; and is alſo partly attached to the adjacent interoſſeus ligament of the leg. But from the ſaid middle it ariſes for a long way according to the length of the leg from the ſaid interoſſeus ligament, and eſpecially from the tibia near the ſaid ligament; and ſo it goes on for about two thirds of the length of the tibia.

b Part of the tendinous covering of the leg, from the inner ſurface of which the tibialis here ariſes: c c the place where the ſaid covering is cut off, where the muſcle no longer continues to ariſe from it.

It ariſes alſo from that branch of the ſaid covering, that is placed betwixt this tibialis muſcle and the long extenſor of the toes.

d The tendon, in which it ends. The manner in which the ſaid tendon goes under the horns of the ligament, by which the tendons are confined in the bend of the foot as far as the end of the leg, ſee in Tab. I. r t in the leg and foot: and in Tab. IX. *i k* in the right foot, and y z in the left.

Add here Fig. 7.

The *ſyſtematic connexion* appears in Tab. I. n—p in the leg and foot; where in part it is covered at the bottom by the abductor of the great toe A.

Laterally its connexion appears in Tab. IX. U V W in the left foot: and *g h* in the right foot.

FIGURE VII.

The bifurcated end of the tibialis anticus, in the ſole of the foot.

a One of the horns of the end, inſerted at b into the round and ſmooth ſurface in the inner and lower part of the cuneiform bone, and into the edge of the firſt metatarſal bone.

d The other and ſmaller head, inſerted at d, juſt before the preceding, into the eminence that is in the head of the firſt metatarſal bone of the great toe, at its inner ſide, and almoſt in the middle.

Add here Fig. 6.

The *ſyſtematic connexion* appears in Tab. X. Fig. 22. k. l. Then in Fig. 21. *f. g;* where in part it is covered by the ſhort flexor of the great toe y. Then it appears in like manner at Fig. 20. i. k; in part covered by the ſhort flexor of the great toe p. And what there appears naked, is in Fig. 19. covered by the abductor of the great toe F.

FIGURE VIII.

The ſoleus, in its fore part.

a a b c c Its origin from the upper head of the fibula, and from a large part of the ſpine, which ſtands out below its head in the back part of the bone.

d e f f Its origin, at d e from the eminence of the tibia which is in its back part, and ſtands out obliquely below from its upper head; and where that eminence ends, it continues to ariſe at e f f from the poſterior margin of the inner ſpine of the tibia, beyond the middle of the ſaid length of the bone.

g. h The tendinous ſurface running out a conſiderable way.

i i The tendinous portion, which, like a partition, divides the fleſhy part. But it begins internally almoſt in the beginning of the muſcle itſelf.

k k. l l Fleſhy fibres, which, deſcending from each ſide, run together, and join the tendinous partition i i.

m. n The two points in which the fleſh of each ſide terminates; and of which the inner, marked n, is thicker, larger, and runs out longer.

I have alſo ſeen theſe two fleſhy parts joined in one at their ends; ſo as to form a ſingle tip or point, but larger, in their end.

o The tendon, by which the ſoleus is inſerted into the calcaneum at p, from whence it is cut off.

q The tendinous ſurface, from whence the tendon on that ſide begins.

Add here Fig. 9.

The *ſyſtematic connexion* appears in Tab. I. *o e g* in the leg; where the reſt of it is covered by the peroneus longus *p q r*, and by the long flexor of the toes *h k*, with the tibialis poſticus *l*: to theſe add *n* in the ſame figure. Alſo in Tab. II. *u* N P in the leg; covered in the ſame manner by the peroneus longus *w y*, and the long flexor of the toes Q S, with the tibialis poſticus V: to which add Y.

r r r r The tibia or great bone of the leg cut off from before the muſcle.

s s The fibula or leſs bone of the leg cut off in like manner.

FIGURE IX.

The ſoleus, in its back part.

a Its origin from the back part of the upper head of the fibula.

b A tendinous part of its beginning, which ariſes from the tibia c c. But it ſprings from that eminence of the tibia, which ſtands out obliquely from the back part of its upper head.

d d The tendinous ſurface, whence the tendon of its back part ariſes.

e e The mark which reſembles an indentation, where the fleſhy part is divided within by a tendinous partition.

f The tendon, in which it ends.

g g The tendon of the gemellus here cut off, where it firſt joins itſelf to the tendon of the ſoleus. It joins that tendon in an oblique courſe, ſooner on the outter ſide of the leg.

h The tendo Achillis, inſerted at i i into the poſterior and lower protuberant part of the tubercle of the calcaneum, which forms the heel.

Add here Fig. 8.

The *ſyſtematic connexion* appears in Tab. VI. *O*—E in the leg; where it is partly covered by the plantaris *W*. Then in Tab. V. a a b in the leg; covered by the gemellus *L—W*.

Laterally its connexion appears in Tab. IX. *z D H* in the left leg; covered by the gemellus *w y*; and *C D* in the right leg; covered by the gemellus W X, and the plantaris *L*.

FIGURE X.

The gemellus.

a b c c d e e f The inner head, beginning by two tendinous origins b. d, of which b the lower tendon is thick, and ariſes at c c, juſt above the back part of the inner condyle of the femur, near its inner ſide.

d The upper thin head, which ariſes at e e from the edge of the back part of the femur, near its inner ſide, juſt above its lower origin.

f The tendinous ſurface, formed by an excurſion of the tendinous ſurface.

g h i i k The outer head, ariſing with a tendinous beginning h, from the oblong eminence i i that is in the outer ſide of the femur, near its back part, juſt above the ſinus from whence the popliteus ariſes.

k The tendinous ſurface, which the tendinous origin forms by an excurſion.

l m The two points or tips in which the fleſh ends.

n The tendon, that joins the tendon of the ſoleus.

The *ſyſtematic connexion* appears in Tab. V. *L—W* in the leg; lying under the outer head of the bicipital muſcle of the leg *t w* in the thigh; and within the ſemimembranoſus *n o p*. Alſo in Tab. VI. *D* and *W* in the thigh: And in Tab. VII. T and U in the thigh.

Moreover, its connexion appears in its fore part in Tab. I. *b c d n n* in the leg. And laterally in Tab. IX. *w x y H* in the left leg, and V—Y in the right.

o The tendon of the ſoleus, here cut off at p.

q The tendo Achillis, inſerted at r r into the poſterior and moſt eminent part of the protuberance of the calcaneum, that forms the heel.

FIGURE XI.

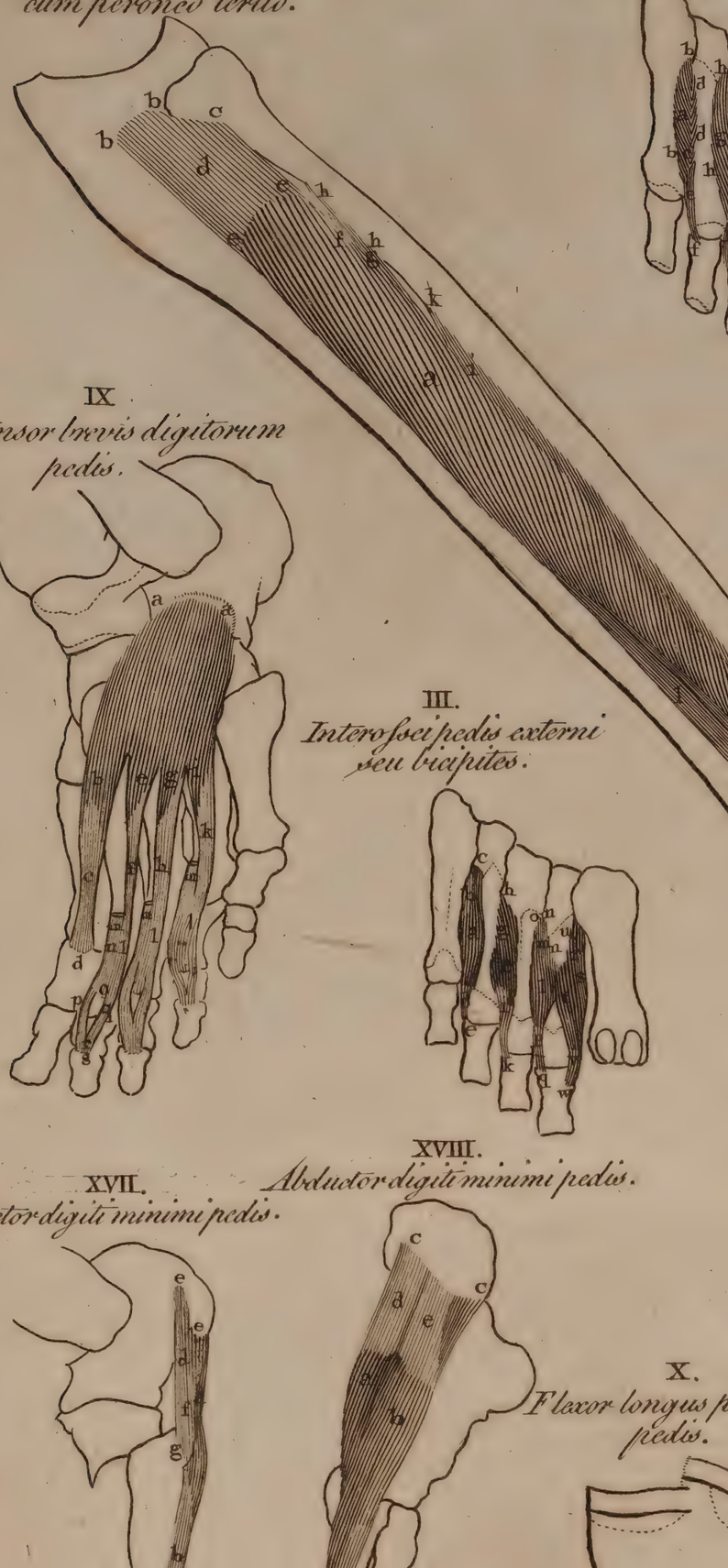
The plantaris.

a a Its origin from the root of the outer condyle of the femur, near the inner part of the origin of the gemellus.

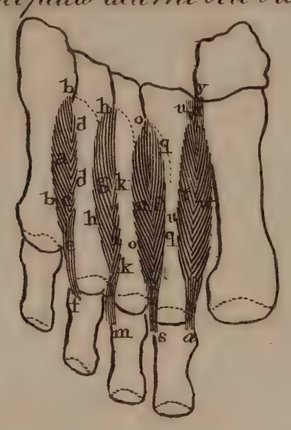
b The tendon, in which it ends; inſerted into the inner ſide of the calcaneum, near the end of the tendo Achillis: which ſee in Tab. IX. *X* in the right foot.

The *ſyſtematic connexion* appears in Tab. VI. *S W* in the thigh and leg; at its origin ſeated behind the outer head of the gemellus *H*, and of the bicipital muſcle of the leg *l;* in its end behind the tendo Achillis D. Then in Tab. V. *C* c in the thigh and leg; placed likewiſe behind the gemellus *L—W*, and the biceps of the leg *t;* in the end behind the tendo Achillis *Y*. Moreover in Tab. VII. V in the thigh.

I.
Extensor longus digitorum pedis cum peroneo tertio.

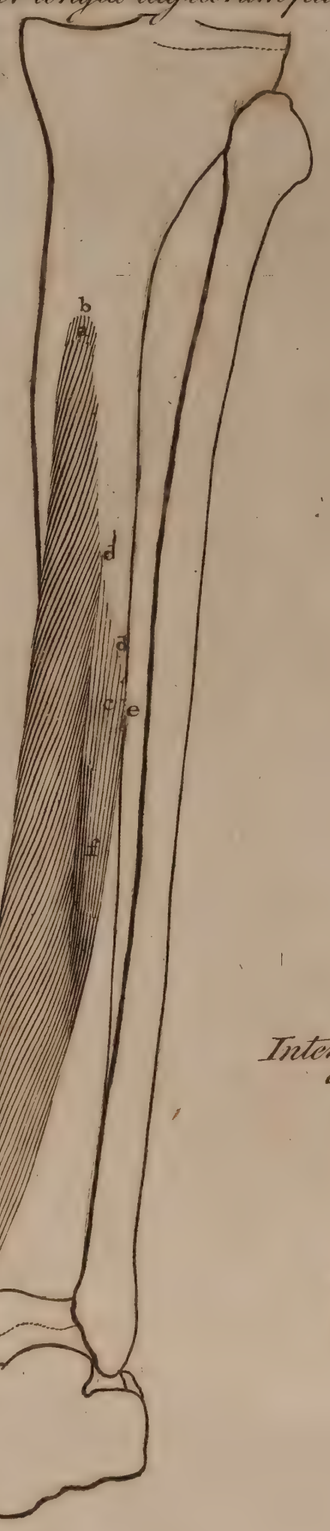


II.
Interoſsei pedis externi seu bicipites.



V.
Flexor brevis digitorum pedis.

VI.
Flexor longus digitorum pedis.

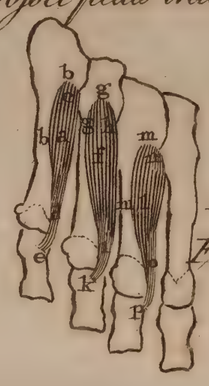


VII.
Flexor longus digitorum pedis.

IX.
Extensor brevis digitorum pedis.

III.
Interoſsei pedis externi seu bicipites.

IV.
Interoſsei pedis interni.



VIII.
Flexor longus digitorum cum lambricalibus & Flexore longo pollicis pedis.

XVII.
Abductor digiti minimi pedis.

XVIII.
Abductor digiti minimi pedis.

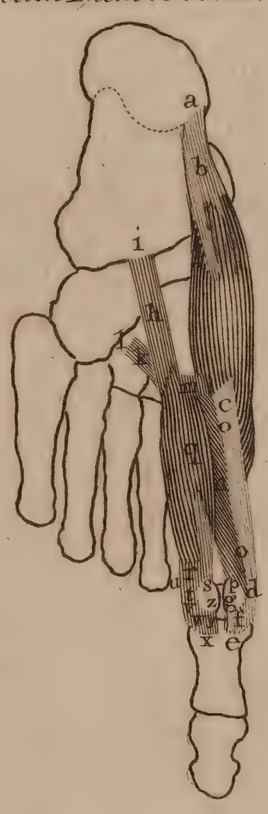
X.
Flexor longus pollicis pedis.

XI.
Extensor proprius pollicis pedis.

XVI.
Flexor brevis digiti minimi pedis.

XV.
Flexor brevis digiti minimi pedis.

XII.
Abductor pollicis pedis cum Flexore brevi.



XIII.
Abductor pollicis pedis cum Flexore brevi.

XIV.
Adductor pollicis pedis Transversalis.

A. Bell Sculp.t

In the fore part its connexion appears in Tab. II. T in the leg. And in Tab. I. *m* in the leg. And laterally its connexion appears in Tab. IX. *L X* in the right foot, and *P* in the left.

FIGURE XII.

The tibialis poſticus, in its back part.

a a Its origin from the tibia, from whence it ariſes outwardly tendinous at b b. It ariſes from the flat ſide of the tibia, at the root of that part to which the fibula is jointed, and is in ſome meaſure extended downwards over that part which lies next the fibula.

c The origin from the fibula, from whoſe whole flat ſurface it continues to ariſe for more than two thirds of its length, extending from beneath the upper head of that bone towards the tibia: See Tab. IV. *u u* in the leg. It ariſes partly alſo from the ligament that is fixed betwixt the bones of the leg, where they are moſt apart from each other.

d d The tendinous ſurface of that part which ariſes from the fibula.

e f The tendon, ariſing at e from the fleſhy part, and paſſing behind the inner ancle at f, where it is thicker and harder. How it is retained there by the ligament, ſee in Tab. V. e in the leg, and in Tab. I. u in the leg and foot, and in Tab. IX. *d* in the right foot.

Add here Fig. 13. and 14.

The *ſyſtematic connexion* appears in Tab. VIII. E—L in the leg. Then in Tab. VII. Z—d e in the leg; behind the popliteus W Y. and the long flexor of the great toe h, and the long flexor of the toes f. Then in Tab. VI. G in the leg; where the reſt is covered by the ſoleus *O* &c. See alſo in Tab. V. d in the leg.

FIGURE XIII.

The tibialis poſticus, in its fore part.

a The tendon going to the inner ancle, behind which it bends and goes along the inner ſide of the foot, where it is confined by a ligament: See x in the foot of Tab. I. and *f* in the right foot of Tab. IX.

c The principal part of the tendon, inſerted into the lower and moſt eminent part of the thick and rough protuberance, that ſtands out from the navicular bone, in the inner ſide of the foot.

d A thin portion running out from the tendon, and inſerted at e into the lower part of the firſt cuneiform bone, near its poſterior edge.

Add here Fig. 12. and 14.

The *ſyſtematic connexion* appears in Tab. IV. *q—y* in the leg and foot. And in Tab. III. P—R S—U in the leg and foot. Then in Tab. II. F V W X in the leg and foot; covered by the long extenſor of the toes A, and the proper extenſor of the great toe H I. Then in Tab. I. *l* y in the leg and foot; where what appears of it naked in Tab. II. lies behind the tibialis anticus n in the leg; the extremity being covered by the abductor of the great toe A in the foot.

Laterally its connection appears in Tab. IX. *b b c* in the right foot.

FIGURE XIV.

The tendon of the tibialis poſticus, in the ſole of the foot.

a The place where the tendon is cut off.

b The knot of this tendon, which lies cloſs upon the head of the aſtragalus, and on the lower and back part of the protuberance in the navicular bone: only the ligament lying betwixt which ſuſtains the head of the aſtragalus, and paſſes along the ſole of the foot, from the calcaneum and navicular bone.

c The principal part of the tendon here inſerted beneath the navicular bone, into the lower and moſt eminent part of the thick rough protuberance, that ſtands out from that bone on the inner ſide of the foot.

d d The thin expanded portion, inſerted in the lower and back part of the firſt cuneiform bone.

e The thin portion, which is inſerted at f into the bottom and back part of the protuberance in the third cuneiform bone: and it runs on at g to the ſecond metatarſal bone, and at h to the third; and inſerts itſelf into the lower part of the head of the former, on that ſide which is next the little toe. It alſo gives off the portion i to the ſhort flexor of the great toe, which portion is cut off at k.

l Another portion going off from the tendon, and dividing into two m. o: of which m is inſerted into the lower part of the calcaneum at n, near the cuboide bone, near the edge which is next the aſtragalus: the other part o is inſerted at p into the lower part of the cuboide bone, near the poſterior edge of the third cuneiform bone.

Add here Fig. 13. and 12.

The *ſyſtematic connexion* appears in Tab. X. Fig. 21. E F G H I; where it is in part covered by the ſhort flexor of the great toe p, the adductor of the great toe l k, and by the tendons of the long peroneus. Then in Fig. 20. f g h; covered by the tendon of the long flexor of the toes A B, and by the head that joins it in the ſole of the foot C D, with the tendon b of the long flexor of the great toe. Afterwards in Fig. 19, behind the abductor of the great toe.

THE

Twenty-fifth Anatomical Table

OF THE

HUMAN MUSCLES

EXPLAINED.

Muſcles of the ſmall toes.

FIGURE I.

The long extenſor of the toes with the third peroneus, laterally.

a The *long extenſor of the toes* conjoined *with the third peroneus* into one.

b b c c The firſt part of its origin, ſpringing from the root of the upper head of the tibia at b b, juſt before the upper head of the fibula: and at c c from the anterior ſpine of that head of the fibula.

d Part of the tendinous vagina or ſwath of the leg, from the lower or inner ſurface of which the fleſh of this part of the origin of the muſcle ſprings; and is cut off at e e, where the fleſh no longer goes off from it.

It ariſes alſo from the production which the ſaid tendinous ſwath ſends in betwixt this extenſor and the tibialis anticus.

f g h h The other part of the beginning, which from its origin is tendinous at g, and ariſes from the anterior ſpine of the fibula h h, and from the margin of it that lies next the tibia.

i i The third portion of its origin, which for the moſt part is tendinous from its beginning at i i, and ariſes at k k from the anterior ſpine of the fibula, and from the flat ſide in which that ſpine terminates in its lower part. Part of this extenſor belonging to the peroneus, ariſes alſo from the production of the tendinous ſwath of the leg.

l The tendon of the long extenſor of the toes, which divides itſelf into four tendons m. n. o. p, running over the back of the foot to the four ſmall toes.

The manner in which it runs under the tranſverſe ligament at the extremity of the leg and foot, ſee in Tab. IX. X in the left foot; and in Tab. I. q in the foot.

q The tendon of the long extenſor running over the back of the little toe. r The extremity of that tendon, inſerted into the oblong tranſverſe tubercle that is in the poſterior head of the ſecond bone or phalanx of this toe, in its upper ſide.

s t Portions of the tendon running to the third bone, and ending in the common extremity u, inſerted at v into the upper part of the firſt.

w The aponeuroſis, which goes from this ſide to the tendon q; and is produced from the abductor of the little toe, from whence it is here cut off at x.

The aponeuroſis, that joins to the other ſide of this and the reſt of the tendons, ſee in Tab. I. h in the foot, and in Tab. II. q in the foot, and Tab. III. u in the foot. And the ſaid aponeuroſis ariſes partly from the capſule of the joint of the toe with the metatarſus, in part from the firſt interoſſeus and the lumbricalis, and partly from the ſide of the bone of the firſt phalanx.

y. y. y The cut tendons of the ſhort extenſor of the toes.
z *a* The common tendon of the long and ſhort extenſor. z the portion that is produced by the ſhort extenſor; *a* that produced by the long extenſor: and betwixt them is a mark of diviſion. *b* the end inſerted into the bone of the ſecond order, as that of r into the little toe. *c. d* portions running to the third bone, of which the one *c* is from the ſhort extenſor; the other *d* from the long extenſor. *e* the common end of them inſerted at *f* into the upper part of the poſterior head of the laſt bone.
g The aponeuroſis, which from this ſide joins that part of the common tendon that is formed by the tendon of the ſhort extenſor. This goes off from the ſecond interoſſeus of the ſame toe, and from the capſule of the joint.
The ſame is obſervable alſo in the ſecond and third toe.
h i k The tendon of the third peroneus, here ariſing from the fleſh at *h*, and inſerted at *k* into the upper part of the root of the poſterior head of the fifth metatarſal bone, near its juncture with the fourth, and thence is continued along the ſpine in the upper ſide of the ſaid fifth metatarſal bone.
The manner how it runs under the ligament at the extremity of the leg and foot, ſee in Tab. IX. X in the left foot, and Tab. I. q in the foot.
The *ſyſtematic connexion* appears in Tab. IX. G—R and f—m in the left extremity; partly covered by the long peroneus *S*, and the ſhort peroneus B C.
In the fore part its connexion appears in Tab. II. A—E and m—q in the leg and foot; partly covered by the extenſor proper to the great toe H I. Then in Tab. I. *t*—h in the leg and foot, placed in part behind the extenſor proper to the great toe i, and the tibialis anticus n.
Moreover, in Tab. III. n. o. p. q r s t u in the feet. And in Tab. V. r z s in the foot. In Tab. VI. U V in the foot. And in Tab. VII. *c c* in the foot. And in Tab. IX. *p* in the right foot.

FIGURE II.

The external or bicipital interoſſei of the foot, in their upper ſide.

a b b c d d e f The *ſecond interoſſeus of the fourth toe.*
a The thicker head, ariſing at b b from more than the poſterior half of the inner ſide of the fifth metatarſal bone, that is oppoſite the fourth.
c The ſmaller head, ariſing at d d from the back part of the lower ſide of the fourth metatarſal bone, that lies next the fifth bone.
e The tendon, inſerted at f into the lower part of that ſide of the poſterior head of the firſt bone of the fourth toe, that lies next the little toe.
Add here Fig. 3. a—e.
The *ſyſtematic connexion* appears in Tab. IV. *P* in the foot. Then in Tab. VIII. S in the foot: and in Tab. IX. q in the left foot; covered by the tendon O of the long extenſor of the toes.
g h h i k k l m The *ſecond interoſſeus of the third toe.*
g The thicker head, ariſing at h h from more than the poſterior half of the ſide of the fourth metatarſal bone, that lies next the third.
i The ſmaller head ariſing at k k from the poſterior part of the lower margin of the ſide of the third metatarſal bone that lies next the fourth.
l The tendon, inſerted at m in the lower part of that ſide of the poſterior head of the firſt bone of the third toe, that lies next the fourth toe.
Add here Fig. 3. f—k.
The *ſyſtematic connexion* appears in Tab. IV. *X* in the foot. Then in Tab. III. betwixt k and l in the left foot; covered by the ſhort extenſor of the toes k. In Tab. II. covered alſo by the tendon of the long extenſor of the toes A E that belongs to the fourth toe. Then in Tab. VIII. T in the foot: and in Tab. IX. p in the left foot; covered by the ſhort extenſor of the toes d, and by the tendon of the long extenſor P.
n o o p q q r s The *ſecond interoſſeus of the ſecond toe.*
n The thicker head, ariſing at o o from more than the poſterior half of the ſide of the third metatarſal bone, that lies next the ſecond.
p The thinner head, ariſing at q q from the poſterior half of the ſide of the ſecond metatarſal bone, that lies next the third, and particularly from the lower margin of the oblong eminence that is extended along that ſide.
r The tendon, inſerted at s into the lower part of that ſide of the poſterior head of the firſt bone of the ſecond toe, that lies next the third toe.
Add here Fig. 3. l—q.
The *ſyſtematic connexion* appears in Tab. IX. *L* in the foot. Then in Tab. III. betwixt i and k in the left foot, covered by the ſhort extenſor of the toes i. In Tab. II. it is alſo covered by the tendon of the long extenſor of the toes A E belonging to the third or middle toe. Then in Tab. VIII. V in the foot: and in Tab. IX. o in the left foot; covered by the ſhort extenſor of the toes c, and the tendon of the long extenſor Q.
t u u v w x y z *a* The *firſt interoſſeus of the ſecond toe.*
t The thicker head, ariſing at u from more than the poſterior half of that ſide of the ſecond metatarſal bone, that lies next the firſt bone. v The tendinous part of its beginning.
w The thinner head, ariſing with a tendinous beginning x from the upper part of the tip of the larger cuneiform bone at y, and is inſerted into the firſt and ſecond metatarſal bone.
z The tendon inſerted at *a* into the lower part of that ſide of the poſterior head of the firſt bone of the ſecond toe, that lies next the great toe.
But the fibres of each head of this muſcle meet together at acute angles.
Add here Fig. 3. r—w.
The *ſyſtematic connexion* appears in Tab. IV. *H* in the foot. Then in Tab. III. m m in the foot; covered by the ſhort extenſor of the toes f h. Then in Tab. II. h in the foot; covered by the ſhort extenſor of the toes i k, and by the tendon of the extenſor proper to the great toe I K. And ſo in Tab. I. at L in the foot; and in Tab. IX. n in the left foot; covered by the ſhort extenſor of the toes a b, and by the tendon of the extenſor proper to the great toe S.

FIGURE III.

The external bicipital or interoſſei muſcles of the toes, viewed in their lower part.

a b c d e The *ſecond interoſſeus of the fourth toe.*
b Part of the tendinous beginning.
c Its origin from the poſterior head of the fourth metatarſal bone, that lies next the fifth.
It alſo ariſes from the ligament that confines the tendon of the long peroneus in the ſole of the foot: ſee Tab. X. Fig. 21. U P.
d The tendon, inſerted at e into the lower part of that ſide of the poſterior head of the firſt bone of the fourth toe, that lies next the fifth.
Add here Fig 2. a—f.
The *ſyſtematic connexion* appears in Tab. X. Fig. 22. *b c d*; covered by the interoſſeus of the little toe *e*. Then in Fig. 21. U V; covered by the interoſſeus of the little toe S, the tranſverſalis of the foot f g. Then in Fig. 20. *m n*; covered by the interoſſeus of the little toe *l*, the tranſverſalis of the foot *r*, and the fourth lumbricalis Z, with the tendon of the long flexor of the toes M Q. Then in Fig. 19. X Y; covered by the interoſſeus of the little toe Z, the tranſverſalis of the foot g, and the fourth lumbricalis c, and the tendon of the long and ſhort flexor of the foot V, with the ſhort flexor of the toes T. Then in Fig. 18. m m; covered by the interoſſeus of the little toe o, the tranſverſalis of the foot i, the fourth lumbricalis h, and the tendon of the ſhort flexor of the toes, that belongs to the little toe; alſo by the middle portion of the aponeuroſis plantaris, belonging to the little toe G.
Its connexion is alſo ſeen in Tab. VIII. Y in the foot.
f g h i k The ſecond interoſſeus of the third toe.
g The tendinous part of its beginning.
h Its origin from the root of the poſterior head of the third metatarſal bone, where it lies next the fourth.
i The tendon, inſerted at k into the lower part of the poſterior head of the firſt bone of the third toe, that lies next the fourth toe.
Add here Fig. 2. g—m.
The *ſyſtematic connexion* appears in Tab. X. Fig. 22. v w x; covered by the firſt interoſſeus of the fourth toe y. Then in Fig. 21. Y Z; covered by the firſt interoſſeus of the fourth toe W, the tranſverſalis of the foot f, and the adductor of the great toe k. Then in Fig. 20. o; covered by the tranſverſalis of the foot *r*, the third lumbricalis X, and the tendons O. P of the long flexor of the toes, and the adductor of the great toe t. Then in Fig. 19. i; placed under the ſame parts: and Fig. 18. l; placed under the ſame, and under the middle portion E of the aponeuroſis plantaris.
l m n n o p q The *ſecond interoſſeus of the ſecond toe.*
m The tendinous part of the beginning.
n n Its origin from the ſecond metatarſal bone, before the root of its poſterior head, that lies next the third metatarſal bone.
o Its origin from the third metatarſal bone, near the root of its poſterior head, next the ſecond metatarſal bone.
p The tendon, inſerted at q into the lower part of the ſide of the poſterior head of the firſt bone of the ſecond toe, next the third or middle toe.
Add here Fig. 2. n—s.
The *ſyſtematic connexion* appears in Tab. X. Fig. 22. p q r; placed under the firſt interoſſeus of the third or middle toe s. Then in Fig. 21. c d; placed under the firſt interoſſeus of the middle toe a, under the tranſverſalis of the foot f, and the abductor of the great toe k. Then in Fig. 20. *q*; covered by the tranſverſalis of the foot *r*, the ſecond lumbricalis W, and the tendon of the long flexor of the toes N. Then in Fig. 19. k, and Fig. 18. k; covered by the ſame parts.
r s t u v The *firſt interoſſeus of the ſecond toe.*
r The thicker head.
s. t Tendinous parts of the origin.
u Its origination from more than the poſterior half of that ſide of the ſecond metatarſal bone that lies next the firſt.
v The tendon, inſerted at w into the lower part of that ſide of the poſterior head of the firſt bone of the ſecond toe, that lies next the great toe.
Add here Fig. 2. t—*a*.
The *ſyſtematic connexion* appears in Tab. X. Fig 22. m n o. Then in Fig. 21. e; covered by the tranſverſalis of the foot f, and the abductor of the great toe k l. Then in Fig. 20. betwixt the firſt lumbricalis, the metatarſal bone, and the firſt bone of the ſecond toe; covered as before in Fig. 21. and alſo by the firſt lumbricalis V. So likewiſe in Fig. 19. and 18.

FIGURE IV.

The inner interoſſei of the foot, viewed in their lower part.

a b b c d e The *interoſſeus of the little toe.*
b b Its origin from the back part of the lower edge of that ſide of the fifth metatarſal bone, that lies next the great toe.
c The tendinous part of its origin.
The manner how it ariſes from the ligament that confines the tendon of the long peroneus in the ſole of the foot, ſee in Tab. X. Fig. 21. S N.
d The tendon, inſerted at e into the lower part of that ſide of the poſterior head of the firſt bone of the fifth or little toe, that lies next the great toe.
The *ſyſtematic connexion* appears in Tab. X. Fig. 22. *e f g*. Then in Fig. 21. S T; covered by the ſhort flexor of the little toe Q, and the tranſverſalis of the foot f h. Then in Fig. 20. *l*; covered by the ſhort flexor of the little toe *i*, and the tranſverſalis of the foot *r*, by the tendon M Q of the long flexor of the toes, and the fourth lumbricalis Z. Then in Fig. 19. Z; covered by the ſhort flexor of the little toe a, and the tranſverſalis of the foot g h, and the tendon V of the ſhort flexor of the toes, with the tendon of the long flexor that belongs to the little toe, and the fourth lumbricalis c. And ſo in Fig. 18. o; covered as before.
Moreover in Tab. VII. it appears at *e* in the foot.
f g g h i k The *firſt interoſſeus of the fourth toe.*
g g Its origin from the back part of the lower edge of that ſide of the fourth metatarſal bone, that lies next the great toe.
h The tendinous part of its beginning.
The manner how it further ariſes from the ligament that confines the tendon of the long peroneus in the ſole of the foot, ſee in Tab. X. Fig. 21. W P.
i The tendon, inſerted at k into the lower part of that ſide of the poſterior head of the firſt bone of the fourth toe, that lies next the great toe.
The *ſyſtematic connexion* appears in Tab. X. Fig. 22. y z *a*; covered by the ſecond interoſſeus of the fourth toe *b*. Then in Fig. 21. W X; covered by the ſecond interoſſeus U, the tranſverſalis of the foot f g, and the adductor of the

great toe k. Then in Fig. 20. *o*; covered by the second interoſſeus *m*, the tranſverſalis of the foot *r*, the adductor of the great toe t, the fourth lumbricalis Z, and the third X, with the tendons of the long flexor of the toes M Q and P. Then in Fig. 19. betwixt the third lumbricalis d, the metatarſal bone, and the firſt bone of this fourth toe: alſo betwixt the fourth lumbricalis e, the tendon U, and the tranſverſalis of the foot g; and covered by the ſame parts as in Fig. 20. with the addition of the ſhort flexor of the toes T R. Then in Fig. 18. betwixt the third lumbricalis g, the metatarſal bone, and the firſt bone of this fourth toe: alſo betwixt the fourth lumbricalis h, the tranſverſalis of the foot i, and the portion F of the aponeuroſis plantaris; covered by the parts as before in Fig. 19. and by the portion F of the aponeuroſis plantaris.

l m m n o p The *firſt interoſſeus of the third toe.*

m m Its origin from the poſterior part of the lower edge of that ſide of the third metatarſal bone, that lies next the great toe.

n The tendinous part of its origination.

o The tendon, inſerted at p into the lower part of that ſide of the poſterior head of the firſt bone of the third toe, that lies next the great toe.

The *ſyſtematic connexion* appears in Tab. X. Fig. 22. s t u; covered by the ſecond interoſſeus of this third toe u. Then in Fig. 21. a b; covered by the ſecond interoſſeus Y, and the tranſverſalis of the foot f, with the adductor of the great toe k. Then in Fig. 20. betwixt the ſecond lumbricalis W, the metatarſal bone, and the firſt bone of the third toe; covered as before in Fig 21. and by the ſecond lumbricalis W. So likewiſe in Fig. 19. betwixt the ſecond lumbricalis e, the metatarſal bone, and the firſt of the third or middle toe. And in Fig. 18. betwixt the ſecond lumbricalis f, and firſt bone of the third toe.

FIGURE V.

The ſhort flexor of the toes.

a Its origin from the lower part of the calcaneum, near the root of the protuberance that forms the heel: from whence it ariſes outwardly tendinous at b; in which part it coheres for a conſiderable way with the middle aponeuroſis plantaris, in ſuch a manner that it ſeems to ariſe from thence.

c The portion, belonging to the ſecond toe. d its tendon, having a ſlit in it marked e, and afterwards dividing into two tails f. g: which cohere together again by a thinner portion h, and are at laſt inſerted at i k into the tubercles, that are fixed at the lower part of each margin of the ſecond bone of this toe, before the head of its firſt bone.

l The portion, belonging to the third toe. m its tendon, terminating like the tendon d of the firſt portion.

n The portion belonging to the fourth toe. o its tendon, terminating like the tendon d.

p The tendon, belonging to the little toe, and terminating like the tendon d.

For the ligaments by which the tendons are confined, ſee Tab. X. Fig. 18. s t.

The *ſyſtematic connexion* appears in Tab. X. Fig. 19. L—V; where part of the tendons lies under thoſe of the long flexor of the toes l, &c. Then in Fig. 18. v w w. &c. where the tendons are placed alſo under thoſe of the long flexor x. &c. but the reſt of the muſcle is covered by the middle aponeuroſis plantaris A B C D E F G.

Moreover in Tab. IX. it appears at *x y* in the right foot, and y z in the left foot. And in Tab. II. c d in the foot. Tab. I. E in the foot. Tab. VI. Y and *d* in the foot. And Tab. V. *e* in the foot.

FIGURE VI.

The long flexor of the toes, in its back part.

a The tendinous part of its uppermoſt origin, ariſing at b from the back part of the tibia, below the middle of the long eminence, from whence the ſoleus ariſes.

c Another tendinous part of its origin, ariſing at d d from the back part of the tibia, and at e from the next adjacent part of the interoſſeus ligament, that is betwixt the tibia and fibula. This tendinous portion, with the adjacent fleſhy portion f, are placed under the tibialis poſticus.

g The tendon.

The ligament, by which it is confined near the inner ancle, ſee in Tab. V. e in the leg and foot.

Add here Fig. 7. and Fig. 8. a—s.

The *ſyſtematic connexion* appears in Tab. VII. f g in the leg; covered by the long flexor of the great toe h, and by the popliteus Y. Then in Tab. VI. F in the leg; covered by the ſoleus *O*, &c. And in Tab. V. betwixt the tendon d and *y* in the left foot, alſo betwixt d and the tendon of the plantaris in the right foot.

FIGURE VII.

The long flexor of the toes, in its fore part.

a a its origin from the edge of the tibia.

b c The tendon, ariſing here at b from the fleſh, and running along the inner ſide of the ancle at c to the ſole of the foot.

The *ligament*, by which it is confined near the ancle, and at the eminence of the calcaneum, that ſuſtains the head of the aſtragalus, (under which eminence it goes along the ſide of the foot) ſee in Tab. I. u in the leg and foot, and in Tab. IX. *d* in the foot.

d The fleſhy head, that joins the long flexor in the ſole of the foot. e e its origin from inner ſide of the protuberance of the calcaneum, that forms the heel.

Add here Fig. 6. and Fig. 8. a—s.

The *ſyſtematic connexion* appears in Tab. III. X—c in the leg and foot; covered by the tendon of the tibialis poſticus S—U. So alſo in Tab. II. Q R R S Z a b in the leg and foot; covered in the ſame manner by the tendon of the tibialis poſticus V V. And in Tab. I. *b i i k* z in the leg and foot, covered in like manner by the tendon of the tibialis poſticus *l* y y, and the abductor of the great toe A B.

Laterally its connexion appears in Tab. IX. *γ O O a a* in the right foot.

FIGURE VIII.

The long flexor of the toes, with the lumbricalis and tendon of the long flexor of the great toe, in the ſole of the foot.

a b The *tendon of the long flexor of the toes.* b the knot where the tendon rubs againſt the calcaneum.

c The portion, by which the tendon of the long flexor of the toes, joins itſelf to the tendon of the long flexor of the great toe.

d e f g g h i The fleſhy head, that joins the long flexor of the toes in the ſole of the foot, compoſed of two portions at its origination e and f: of which

e The one part ariſes at g g from the bottom of the calcaneum before the inner and lower part of the tubercle, that forms the heel. The continuation of this part, ſee in Fig. 7. d e e.

f The other part, begins by a thin tendon h, from the lower part of the calcaneum at i, before the lower and outer part of the protuberance that forms the heel.

k. l m. n The four tendons, into which the tendon of the long flexor of the toes, with the head that joins it, divides or ſplits itſelf. Which tendons belong to the four ſmall toes o. p. q. r; and being ſlit or divided according to their length, they are inſerted at s. s. s. s into the third or laſt bones of the toes.

The ligaments, by which thoſe tendons are tied down or confined to the bones of the toes, ſee in Tab. X. Fig. 18. s. t. u.

Add here Fig. 7. and 6.

The *ſyſtematic connexion* appears in Tab. X. Fig. 20. A—R, where the lumbricalis S. W. X. Z cover part of the tendons. Then in Fig. 19. l m, and on that ſide of the ſhort flexor of the toes that lies next the great toe; and the reſt of it is covered by the lumbrical muſcles c. d. e. f, and the ſhort flexor of the toes L—V, the abductor of the little toe A B, and the abductor of the great toe F G. Then in Fig. 18. x. &c. on that ſide of the tendons of the ſhort flexor of the toes v, that is next the great toe, and betwixt the horns of thoſe tendons w w: the reſt being covered by the ſame muſcles as in Fig. 19. and alſo by the middle aponeuroſis plantaris D E F G.

Moreover in Tab. VII. its connexion appears at *d f h* in the foot. And in Tab. VI. below X, and *d* in the foot. Laterally in Tab. IX. y. z in the foot.

t u v The *firſt lumbricalis*, ariſing at u from the firſt and ſecond tendons of the long flexor of the toes. v the tendon, in which it ends.

Its connexion appears in Tab. X. Fig. 20. S T V. Then in Fig. 19. f; covered by the ſhort flexor of the toes N O R. Then in Fig. 18. e; covered by the middle aponeuroſis plantaris A D.

w x The *ſecond lumbricalis.* x the tendon, in which it ends.

The *ſyſtematic connexion* of it appears in Tab. X. Fig. 20. W; covered by the firſt lumbricalis S, and the third X. Then in Fig. 19. e; covered by the firſt lumbricalis f, and the ſhort flexor of the toes R S. Then in Fig. 18. f, covered by the middle aponeuroſis plantaris A D E.

y z *a* The *third lumbricalis*, ariſing at z from the ſecond and third tendon. *a* its tendon.

The *ſyſtematic connexion* appears in Tab. X. Fig. 20. X Y. Then in Fig. 19. d; covered by the ſhort flexor of the toes R S T U. Then in Fig. 18. g; covered by the middle aponeuroſis plantaris A E F.

b c d The *fourth lumbricalis*, ariſing at *c* from the third and fourth tendon of the long flexor. *d* the tendon, in which it ends.

The *ſyſtematic connexion* appears in Tab. X. Fig. 20. Z *a*. Then in Fig. 19. c; covered by the ſhort flexor of the toes R S T U V. Then in Fig. 18. h; covered by the middle aponeuroſis plantaris A F G.

The tendons inſert themſelves into the tubercles of the bones of the firſt order of the toes, that ſtand out on that ſide of their poſterior heads, which lies next the great toe: and a thin aponeuroſis joins them to the tendons of the long extenſor of the toes.

e The tendon of the long flexor of the great toe; which being increaſed by the portion *f* received from the tendon of the long flexor of the toes, is then in a manner ſplit according to its length *g*, at laſt inſerted at *h* into the laſt bone of the great toe, into the rough protuberance in the lower part of the poſterior head of that bone.

The ligament, by which it is confined, ſee in Tab. X. Fig. 10. c. d. d.

Add here Fig. X.

The *ſyſtematic connexion* appears in Tab. X. Fig. 20. b c d e; covered by the tendon of the long flexor of the toes A, and by the head C that joins it in the ſole of the foot. Then in Fig. 19. n o; covered by the ſhort flexor of the toes N, and the abductor of the great toe F G. Then in Fig. 18. æ æ b; covered by the middle aponeuroſis plantaris A C.

Moreover in Tab. VII. it appears at l l in the foot. In Tab. VI. *e e* in the foot. In Tab. V. *c c* in the foot. In Tab. III. w w in the foot. In Tab. II. f f g in the foot: and in Tab. I. F F G in the foot. Laterally in Tab. IX. *r* in the foot.

Muſcles of the great toe, and of the three next toes.

FIGURE IX.

The ſhort extenſor of the toes.

a a Its origin from the upper part of the anterior protuberance, that ſtands forward from the calcaneum.

b The portion, that goes to the great toe. c the tendon, in which it ends; inſerted at d into the oblique eminence that is in the upper part of the firſt bone of the great toe, juſt before its poſterior head, on that ſide that lies next the ſmall toes.

e The portion belonging to the ſecond toe. f its tendon.

g The portion going to the third or middle toe. h its tendon.

i The portion going to the fourth toe. k its tendon.

l. l. l Thoſe tendons conjoined with the tendons of the long extenſor of the toes, ſo as to form common tendons, which are diſtinguiſhed by an intermediate line.

m. m. m The cut tendon of the long extenſor of the toes.

n l The common tendon formed by the conjunction of the tendon n from the long extenſor, and l from the ſhort extenſor. o the extremity inſerted into the bone

of the 2d phalanx. p. q portions which run to the third bone, of which the one p belongs to the extenſor longus, and the other q to the brevis. r the common end of both thoſe portions, inſerted at s into the upper part of the poſterior head of the bone of the firſt order. The ſame may be alſo obſerved in the third and fourth toe.

Add here Fig. 1.

The *ſyſtematic connexion* appears in Tab. IX. a—e in the left foot; covered by the tendon of the extenſor proper to the great toe S, and the tendons of the long extenſor of the toes R. Q. P. O, by the tendon of the third peroneus L M, of the ſhort peroneus D E, and by the ligament which covers the tendons at the joint of the foot, and upon the inſtep X.

And in Tab. III. e—l in the foot. Then in Tab. II. i k l in the foot, covered by the tendon of the extenſor proper to the great toe I K, and by the tendons of the long extenſor of the toes A E, and the tendon of the third peroneus D. Alſo in Tab. I. H I K in the foot; covered in like manner by the tendon of the extenſor proper to the great toe i, and by the tendons of the long extenſor of the toes c b a *z*, and by the tendon of the third peroneus *x*.

And in Tab. VII. y z *a b* in the foot; covered by the tendon of the ſhort peroneus w. Then in Tab. VI. W in the foot, covered by the tendons of the extenſor longus U, of the third peroneus V, and of the ſhort peroneus L. Then in Tab. V. t; covered in like manner by the tendons of the long extenſor of the toes r, and by the tendon s of the third peroneus, and of the ſhort peroneus i; and moreover by the ligament q, by which the tendons are confined upon the back and bend of the foot.

Muſcles of the great toe.

FIGURE X.

The long flexor of the great toe.

a a Its origin from the poſterior flat ſide of the fibula, beneath a third part of its length: and from thence its riſe is continued along the two lower thirds of the bone, almoſt to the ancle b b.

c c The line wherein the deſcending fibres converge or meet from each ſide.

d The tendon.

The ligament, that confines the tendon, ſee in Tab. IX. *W* in the right foot.

Add here Fig. 8. *e f g h*.

The *ſyſtematic connexion* appears in Tab. VII. h i k in the leg. Then in Tab. VI. H in the leg; covered by the ſoleus *O*, &c. In like manner too it is ſeen in Tab. V. f in the leg.

Laterally its connexion appears in Tab. IX. *P S* in the right foot. And in Tab. III. V in the leg.

FIGURE XI.

The extenſor proper to the great toe, laterally.

a a Its origin from the flat ſide of the fibula, that lies next the tibia in the fore part of the leg; and from that ſide along almoſt the whole anterior ſpine: but below, where the ſaid ſpine is flatted, it ariſes from the flat ſide which it forms. And along the extent of this origination, it ariſes too from the ligament which occludes moſt of the ſpace or interval betwixt the bones of the leg; and below, a ſmall part ariſes alſo from the tibia b, next the ligament.

c The tendinous portion of its origin.

d The tendon, inſerted at e into the upper part of the poſterior head of the laſt bone of the great toe.

The manner in which it is retained by the ligament that is in the fore part of the leg at the bend of the foot, ſee in Tab. IX. Y Z in the left foot: and in Tab. I. r. t in the leg and foot.

f The aponeuroſis, that joins the tendon on this ſide from the capſule of the joint of the great toe, with its metatarſal bone.

The aponeuroſis that joins it on the other ſide, ſee in Fig. 13. f.

The *ſyſtematic connexion* appears in Tab. IX. S S S T in the left foot, covered by the long extenſor of the toes, with the third peroneus G I N.

In its fore part the connexion appears in Tab. II. H I K L M in the leg and foot; covered by the long extenſor of the toes, with the third peroneus. Then in Tab. I. i i i k l l l in the leg and foot; covered by the long extenſor of the toes, with the third peroneus *t y w*, and the tibialis anticus n. Moreover in Tab. IX. *l l m n* in the right foot.

FIGURE XII.

The abductor and ſhort flexor of the great toe, in their lower ſide.

a—e The *abductor of the great toe.*

a Its origin from the root of the protuberance of the calcaneum, that forms the heel; from whence it is outwardly tendinous at b, and in that part coheres for a long way with the aponeuroſis that covers it.

c The tendon, at laſt conjoined at d with the ligament f, that ties the outer ſeſamoide bone to the firſt bone of the great toe, with which ligament it is inſerted at e into the inner and lower part of the poſterior head of the firſt bone of the great toe.

Add here Fig. 13. a—c.

The *ſyſtematic connexion* appears in Tab. X. Fig. 19. F—K; covered by the ſhort flexor of the toes L M N. Then in Fig. 18. Q—S; covered by the aponeuroſis O.

Moreover in Fig. 20. m n, and Fig. 21. *b c d*. And in Tab. V. *d* in the foot.

f The ligament, which ariſing at g from the outer ſeſamoide bone of the great toe, is inſerted at e, conjunctly with the tendon of the abductor d, into the firſt bone of the great toe.

The *ſyſtematic connexion* of this ligament, ſee in Tab. X. Fig. 21. *e*. And Fig. 20. *p*; in part covered by the tendon of the long flexor of the great toe d e. So alſo in Fig. 19. K. and Fig. 18. T.

h—s The *ſhort flexor of the great toe.*

h The longer tendinous head, ariſing at i from the lower and anterior extremity of that ſide of the calcaneum which lies next the other foot, juſt behind its juncture with the cubiform bone.

k The ſhorter tendinous beginning, ariſing at l from the lower part of the middle cuneiform bone of the tarſus.

m Part of that portion of the middle aponeuroſis plantaris, that goes into the beginning of the ſhort flexor of the great toe.

The portion which it receives from the tendon of the tibialis poſticus, ſee in Tab. XXIV. Fig. 14. i.

n Part of the ſhort flexor, which belongs to the outer ſeſamoide bone of the great toe.

o o The part in which the ſhort flexor joins the tendon of the abductor of the great toe. p its inſertion into the outer ſeſamoide bone of the great toe, into the lower and back part of that ſide of the bone which lies next the other foot.

q That part of the ſhort flexor which belongs to the inner ſeſamoide bone of the great toe.

r The tendon, in which it ends, inſerted at s into the back part of the inner ſeſamoide bone of the great toe. But being conjoined at t with the tendinous end of the adductor pollicis, it has one extremity common to that and the tranſverſalis of the foot.

Add here Fig. 13. d e.

The *ſyſtematic connexion* appears in Tab. X. Fig. 21. o—u and y z *a*; covered by the abductor of the great toe *b c*. Then in Fig. 20. s s v p q r; covered by the abductor of the great toe m n, the tendon of the long flexor of the great toe c d, and by the long flexor of the toes C D, &c. with the firſt lumbricalis S. Then in Fig. 19. q q s w x y; covered by the abductor of the great toe F H, the tendon of the long flexor of the great toe n, the firſt lumbricalis f, and the ſhort flexor of the toes N O. Then in Fig. 18. U V W X, and betwixt Y and C; covered by the abductor of the great toe Q R, and by the middle aponeuroſis plantaris A C.

Moreover in Tab. VIII. it appears at w x in the foot. And in Tab. VII. *g* in the foot.

u The place whence the adductor of the great toe is cut off, with the tranſverſalis of the foot.

v The tendinous end, common to the adductor of the great toe, and the tranſverſalis pedis. w the place of its juncture with the ligament y, that goes from the inner ſeſamoide bone of the great toe, to the inſertion of it at x, in the firſt bone of the great toe.

y The ligament which ariſes at z from the inner ſeſamoide bone of the great toe, and being conjoined with the common tendinous end of the abductor pollicis v and tranſverſalis pedis, is inſerted therewith at x into the firſt bone of the great toe.

The *ſyſtematic connexion* appears in Tab. X. Fig. 21. w. And Fig. 20. x; in part covered by the tendon of the long flexor of the great toe d e. So alſo in Fig. 19. u, and Fig. 18. a.

FIGURE XIII.

The abductor and ſhort flexor of the great toe, laterally.

a a b b c The *abductor of the great toe.*

a a Its origin from the lower part of the inner ſide of the root of the tubercle of the calcaneum, where it forms the heel.

b b The meeting together of the fibres in angles.

c The tendon, in which it ends.

Add here Fig. 12. a—e.

The *ſyſtematic connexion* appears in Tab. IX. *f—t* in the right foot.

Alſo in Tab. I. A B C in the foot.

d e The *ſhort flexor of the great toe.*

e The lower part that joins itſelf to the tendon of the abductor pollicis.

Add here Fig. 12. h—s.

The *ſyſtematic connexion* appears in Tab. IX. *u u w* in the right foot; covered by the abductor of the great toe *f v*.

Alſo in Tab. III. d in the foot. And in Tab. II. e in the foot. And in Tab. I. D in the foot; covered by the abductor of the great toe A C.

f The aponeuroſis, coming partly from the tendon of the abductor of the great toe g, and partly from the capſule h of the joint of this toe, with its metatarſal bone, and joins the tendon i i of the extenſor proper to the great toe.

The *ſyſtematic connexion* appears in Tab. IX. *o* in the right foot. And in Tab. I. m in the foot.

k The tendon of the extenſor proper to the great toe, here cut off at l, and inſerted at m into the laſt bone of the great toe.

FIGURE XIV.

The adductor of the great toe, with the tranſverſalis pedis.

a b b c c The ligament, which ariſing from the calcaneum at b b, is inſerted at c c into the eminence of the cubical bone of the tarſus.

d The excurſion of the foreſaid ligament, which outwardly joins the ligament a in Fig. 15. And together they go into the origination e ç of the adductor of the great toe.

The *ſyſtematic connexion* appears in Tab. X. Fig. 21. K—O. Then in Fig. 20. *d d c e g*; covered by the head D F that joins the long flexor of the toes in the ſole of the foot. In Fig. 19. the reſt is covered by the abductor of the little toe B A, and ſhort flexor of the toes L.

f—m The *adductor of the great toe.* Internally it ariſes from the bottom part of the fourth metatarſal bone, near the root of its poſterior head, and in its lower part it ſprings from almoſt the whole poſterior head of the third and ſecond metatarſal bone.

f Part of the adductor of the great toe, which is in a manner diſtinct or ſeparate from the reſt.

g The other more conſiderable portion. h the tendinous part of its origin.

i The tendinous end, which being firſt conjoined at k with the tendinous end p of the ſhort flexor of the great toe, and is with that inſerted into the poſterior and lower part of that ſide of the inner ſeſamoide bone of the great toe, that lies

next the second toe; and being joined at l with the ligament n, that goes from the inner sesamoide bone to the first phalanx of the great toe, inserts itself therewith at m into the said first bone of the phalanx, into the lower part of that side of its posterior head, that lies next the second toe, not much beyond the posterior edge of the said head.

The *systematic connexion* appears in Tab. X. Fig. 21. k—n v; covered by the short flexor of the great toe o. s. Then in Fig. 20. t t u w, covered by the short flexor of the great toe s, and by the long flexor of the toes D M L K, with the lumbricalis Z. X. W. S. Then in Fig. 19. p r t; covered by the short flexor of the great toe q, and the first lumbricalis f, with those in Fig. 20. and also by the short flexor of the toes L T. Then in Fig. 18. Y Z; covered by the short flexor of the great toe, the first lumbricalis e, and the rest mentioned in Fig. 19.

Moreover in Tab. VIII. it appears at *C* in the foot. And Tab. IV. *S* in the foot.

n The ligament, which arises at o from the inner sesamoide bone of the great toe, and being conjoined with the tendon l, from the end of the abductor of the great toe i, is with that inserted into the first bone of the great toe at m. See y Fig. 12.

p The tendinous end of the inner tail of the short flexor of the great toe, here cut off at q, inserted at r into the inner sesamoide bone of the great toe.

s The ligamentary excursion d cut off, together with the ligament a Fig. 15.

t—y The *transversalis of the foot.*

u The tendinous beginning, whose first origination w, springs from the capsule that covers and includes the joint of the little toe with its metatarsal bone.

x The part that arises from the capsule of the joint of the fourth toe with its metatarsal bone, and next adjacent aponeurosis that covers the interossei muscles of that toe.

y y The extremity, by which it joins the tendinous end that is common to the adductor and short flexor of the great toe.

The *systematic connexion* appears in Tab. X. Fig. 21. f g h i. Then in Fig. 20. *r r r f*; covered by the lumbricalis S V W X Z, and by the tendons of the long flexor of the toes N. O. P. Q. Then in Fig. 19. g g h; covered by the lumbricales f. e. d. c, with the tendons of the long flexor of the toes, and those of the short flexor O S. U. V, with the abductor of the little finger E. Then in Fig. 18. i i i; covered by the lumbricales e. f. g. h, by the tendons of the long and short flexor of the toes v, &c. and by the middle aponeurosis plantaris D E F G, and the abductor of the little toe r.

Moreover in Tab. VIII. Z in the foot.

Muscles of the little toe.

FIGURE XV.

The short flexor of the little toe, in its bottom part.

a b The broad ligament, that arises from the lower eminence of the cubiform bone, and is inserted into the posterior heads of the 2d, 3d, 4th, and 5th of the metatarsal bones; and which confines the tendons of the long peroneus in the sole of the foot, like a sheath. Externally it is partly covered by meeting the excursion b of the ligament a Fig. 14; which excursion is here cut off at c.

The *systematic connexion* appears in Tab. X. Fig. 21. N O P. Then in Fig. 20. *f g h*; partly covered by the head D, that joins the long flexor of the toes in the sole of the foot. Then in Fig. 19. W; covered by the short flexor of the toes L T R, and the abductor of the little toe B. And what there appears naked, is in Fig. 18. covered by the portion M; by which the aponeurosis that covers the abductor of the little toe, is conjoined with the middle aponeurosis plantaris.

d e f g The *short flexor of the little toe.*

e Its origin from the ligament a. But inwardly it arises from the middle of the lower side of the root of the posterior head of the fifth metatarsal bone.

f The tendinous end, inserted at g into the lower part of the posterior head of the first bone of the little toe.

Add here Fig. 16.

The *systematic connexion* appears in Tab. X. Fig. 21. Q R; covered by the transversalis pedis h. Then in Fig. 20. *i k*; covered as before, by the transversalis pedis *f*. Then in Fig. 19. a b; covered in like manner by the transversalis pedis h, and the abductor of the little toe B E. So likewise in Fig. 18. p; covered by the transversalis pedis i, and the abductor of the little toe q r.

h The place whence the interosseus of the little toe is cut off at its origin from the ligament a b. i That whence the second interosseus of the fourth toe is cut off. k That whence the first interosseus of the same toe is cut off. l l The origin of the principal part of the adductor of the great toe g h Fig. 14. And m that cut from its other less part f Fig. 14. See P. Fig. 21. Tab. X.

FIGURE XVI.

The short flexor of the little toe, laterally.

a The origin from the outer edge of the fifth metatarsal bone, that stands downward, near its posterior head.

b The part that is inserted at c c into the outer edge of the lower side of the metatarsal bone of the little toe, just behind its anterior head.

d The other and more considerable part, which is inserted into the first bone of the little toe. e The tendinous end, in which it terminates.

Add here Fig. 15. d—g.

The *systematic connexion* appears in Tab. IX. w x in the left foot; covered by the abductor of the little toe r v.

And in Tab. VI. Z—*c* in the foot. Then in Tab. V. *a b* in the foot, covered by the abductor of the little toe y.

FIGURE XVII.

The abductor of the little toe, laterally.

a The fleshy part uncovered.

b The tendon, in which it at last ends; inserted at c into the outer part of the root of the posterior head of the first bone of the little toe.

d The part which is covered by a tendinous expansion.

e e Its origin from the whole outer side of the root of the tubercle belonging to the os calcis, where it forms the heel.

f Part of the aponeurosis that covers it, inserted at g into the back part of the great rough eminence that stands out from the posterior head of the metatarsal bone, belonging to the little toe, in the outer side of the foot.

The aponeurosis, which it sends to the tendon of the long extensor of the toes, see in Fig. 1. w.

Add here Fig. 18.

The *systematic connexion* appears in Tab. IX. r—v in the left foot; covered by the aponeurosis s.

And in Tab. V. u—y in the foot; covered by the aponeurosis u.

FIGURE XVIII.

The abductor of the little toe, in its lower part.

a b The two parts of which it is composed; and of which the part a forms here a distinct tendon, but in other subjects is often joined into one with the other tendon, and in others again it is perfectly distinct.

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f The tendon inserted at g into the outer part of the root of the posterior head of the first bone of the little toe.

The aponeurosis, that goes off from its end to the tendon of the extensor belonging to the little toe, see in Fig. 1. w.

Add here Fig. 17.

The *systematic connexion* appears in Tab. X. Fig. 19. A B C D E; covered by the short flexor of the toes M L. Then in Fig. 18. q r; covered by the aponeurosis I K L.

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OF THE

HUMAN MUSCLES,

WITH THEIR PROPER USES.

Numero majore tabula, minore figura indicata.

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Pſoas magnus,—bends the thigh forwards; or, when the extremity is fixed, aſſiſts in bending the body. XXI. 12. 13. 15.
Pſoas parvus,—aſſiſts the former. XV. 14.
Pterygoideus externus,—pulls the lower jaw forwards, to a ſide, thruſts the teeth out beyond thoſe of the upper jaw, and pulls the ligament from the joint, that it may not be pinched during theſe motions. XII. 15 16.
Pterygoideus internus,—draws the jaw upwards, and to one ſide. XII. 15. 17.
Pyramidalis,—aſſiſts the inferior part of the rectus abdominis. XIII. 7.
Pyriformis,—moves the thigh a little upwards, and rolls it outwards. XXI. 6. 7.

Quadratus femoris,—rolls the thigh outwards. XXI. 8. 9.
Quadratus lumborum,—moves the loins to one ſide, pulls down the laſt rib, and bends the loins forwards. XV. 12. 13.

Radialis externus brevis. XIX. 11. 12. } extend, and bring the hand backwards.
Radialis externus longior. XIX. 13. 14. }
Radialis internus,—bends the wriſt, together with the hands. XIX. 9.
Rectus abdominis,—compreſſes the fore part, but more particularly the lower part of the belly; bends the trunk forwards, and raiſes the pelvis. By its tendinous interſections, it is enabled to contract at any of the intermediate ſpaces; and by its connection with the tendons of the other muſcles, it is prevented from changing place, and from riſing into a prominent form when in action. XIII. 6.
Rectus abducens oculi,—moves the globe of the eye outwards. XI. 26.
Rectus adducens oculi,—turns the eye towards the noſe. XI. 25.
Rectus attollens oculi,—raiſes the globe of the eye. XI. 23.
Rectus cruris,—extends the leg, and in a powerful manner, by the intervention of the patella, like a pully. XXIII. 2. 3.
Rectus deprimens oculi,—pulls the globe of the eye downwards. XI. 24.
Rectus internus major capitis,—bends the head forwards. XVI. 19. 20.
Rectus internus minor capitis,—nods the head forwards. XVII. 6.
Rectus lateralis capitis,—bends the head a little to one ſide. XVII. 5.
Rectus poſticus major capitis,—pulls the head a little backwards. XVII. 2.
Rectus poſticus minor capitis,—aſſiſts the foregoing. XVII. 1.
Retrahentes auriculæ,—draw the ear back, and ſtretch the concha. XI. 3. 6.
Rhomboides major. XVII. 24. } draw the ſcapula obliquely upwards, and directly backwards.
Rhomboides minor. XVII. 23 }

Sacro-lumbalis,—pulls the ribs down. XV. 3. 4. 6.
Salpingo-pharyngæus. XII. 27. 28.
Sartorius,—moves the leg obliquely inwards, or brings one leg and thigh croſs the other. XXIII. 4.
Scalenus medius. XVI. 4. 5. } elevate the ribs, and dilate the thorax; or, when the ribs are fixed, bend the neck to one ſide.
Scalenus poſticus. XVI. 12. }
Scalenus prior. XVI. 11. }
Semimembranoſus,—bends the leg, and brings it directly backwards. XXII. 9. 10.
Semiſpinalis dorſi,—extends the ſpine obliquely backwards. XV. 8.
Semitendinoſus,—bends the leg backwards, and a little inwards. XXII. 11. 12.
Serratus anticus,—raiſes the ribs upwards, or brings the ſcapula forwards. XVII. 22.
Serratus magnus,—dilates the thorax, by pulling up the ribs, and moves the ſcapula forwards and downwards. XVI. 21.
Serratus poſticus inferior,—depreſſes the four inferior ribs. XVII. 17.
Serratus poſticus ſuperior,—elevates the ribs, and depreſſes the thorax. XVII. 16.
Solæus,—extends the foot, by bringing it backwards and downwards. XXIV. 8. 9.
Sphincter ani externus,—ſhuts the paſſage through the anus into the rectum; pulls down the bulb of the urethra, by which it aſſiſts in ejecting the urine and ſemen. XII. 35. 36.
Sphincter ani internus. XII. 31. 32.
Spinalis cervicis,—extends the neck obliquely backwards. XVI. 15.
Spinalis dorſi,—erects and fixes the vertebræ, and aſſiſts in raiſing the ſpine. XV. 7.
Splenius capitis,—brings the head and upper part of the neck backwards laterally, and pulls the head directly backwards. XVI. 27.
Splenius colli,—aſſiſts the former. XVI. 1.
Stapedius,—draws the ſtapes obliquely upwards, towards the cavern. XI. 34. 29.
Sterno-hyoidæus,—pulls the os hyoides downwards. XI. 39.
Sterno-maſtoideus,—turns the head to one ſide, and bends it forwards. XVI. 25. 26.
Sterno-thyroidæus,—draws the larynx downwards. XI. 44.
Stylo-gloſſus,—draws the tongue laterally, and backwards. XI. 40. 43.
Stylo-hyoidæus,—draws the os hyoides to one ſide, and a little upwards. XI. 37.
Stylo-pharyngæus,—dilates and raiſes the pharynx upwards. XII. 27. 28. 30.
Subclavius,—pulls the firſt rib upwards. XVII. 20.
Sublimis,—aſſiſts in bending the fingers. XX. 4.
Subſcapularis,—brings the arm inwards, and rolls it towards the ribs. XVIII. 15.
Supinator brevis,—rolls the radius outwards. XIX. 17. 18.
Supinator longus,—has the ſame uſe with the former. XIX. 16.
Supraſpinatus,—raiſes the arm upwards, and at the ſame time pulls the capſular ligament from between the bones, that it may not be pinched. XVIII. 16. 17.

Temporalis,—pulls the lower jaw upwards, and preſſes it againſt the upper at the ſame time, drawing it a little backwards. XII. 12. 13. 14.
Tenſor tympani,—pulls the malleus and membrana tympani inwards, towards the pars petroſa. XI. 29. 32. 33.
Tenſor vaginæ femoris,—ſtretches the membranous faſcia, extends the leg, and turns it a little outwards. XXII. 8.
Teres major,—moves the arm backwards and downwards, and rolls the head of the os humeri. XVIII. 9. 10.
Teres minor,—aſſiſts the former, brings the arm more directly forwards, and pulls the ligament from between the bones. XVIII. 13. 14.
Thyreo-arytenoidæus,—opens the external rima, and relaxes the upper ſide of the ventriculus laryngis, and the ligaments. XII. 3. 4.
Thyreo-arytenoidæus alter minor. XII. 6. 7.
Thyreo-epiglotticus major. XII. 3. 7. } draw the epiglottis downwards, and
Thyreo-epiglotticus minor. XII. 3. } expand that ſoft cartilage.
Tibialis anticus,—bends the foot, by drawing it upwards and inwards. XXIV. 6. 7.
Tibialis poſticus,—brings the foot inwards and upwards. XXIV. 12. 13. 14.
Trachelo-maſtoideus,—pulls the head backwards, and to one ſide. XIV. 21. 22.
Tragicus,—pulls the point of the tragus a little forwards. XI. 4.
Tranſverſalis cervicis,—turns the neck obliquely backwards, and a little to one ſide. XVI. 16. 17. 18.
Tranſverſalis pedis,—brings the little toe towards the great one. XXV. 14.
Tranſverſus abdominis,—aſſiſts the *obliquus externus et internus*. XIV. 1. 2. 3.
Tranſverſus auriculæ,—draws the parts to which it is connected towards each other, and ſtretches the ſcapula and concha. XI. 5.
Tranſverſus perinæi,—ſuſtains and keeps the perinæum in its proper place. XII. 37. 38.
Tranſverſus perinæi alter,—dilates the bulb of the penis, and draws the perinæum and verge of the anus a little outwards and backwards. XII. 37. 39.
Triangularis ſterni,—depreſſes the ribs and cartilages of the ſternum. XIV. 1.
Triceps brachii,—extends the arm. XIX. 5. 6. 7.

Vaſtus externus,—extends the leg. XXIII. 6. 7.
Vaſtus internus,—aſſiſts the former. XXIII 6. 7.
Veſicæ muſculus. XII. 41.
Ulnaris externus,—aſſiſts in extending the hand. XIX. 15.
Ulnaris internus,—aſſiſts in bending the hand. XIX. 10. 11.

Zygomaticus major,—makes the cheek prominent, by drawing the corners of the mouth aſunder, as in laughing. XI. 10. 11. 13.
Zygomaticus minor,—draws the corner of the mouth obliquely outwards and upwards towards the external canthus of the eye. XII. 10.

F I N I S.